# Malla Reddy Engineering College

(An UGC Autonomous Institution approved by AICTE and affiliated to JNTU Hyderabad,
Accredited by NAAC with 'A++' Grade (III - cycle)
NBA Accredited Programmes - UG (CE, EEE, ME, ECE & CSE) PG (CE - Structural Engg., EEE-Electrical Power Systems, ME - Thermal Engg.).


Lr.No:MREC(A)/BOS-CSE(IoT)/UG/2022-23/Invitation/02

Date:07-08-2023

To,

Dr. K Shanti Sree,

Professor & HOD,

Department of Information Technology

JNTU- Hyderabad

Dear Madam,

**Sub:** Invitation for 6th Board of Studies review meeting for the Departments of CSE (Internet of Things) of Malla Reddy Engineering College (A) convened for the Academic year 2022-23 reg.

The 6th Board of Studies review meeting for the Departments of CSE (Internet of Things) of Malla Reddy Engineering College (A) for the Academic year 2022-23 is convened on 07.08.2023 at 11:00 AM in hybrid (online/offline) mode. You are kindly requested to make it convenient to attend the meeting

The Agenda of the meeting is as follows.

1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2022-23 on 11-02-2023.
2. Discussion and Review of B.Tech. CSE (Internet of Things) MR22 Regulations II-I, II-II Schema and Syllabus and MR21 Regulations 3rd year and 4th year course Schema and Syllabus.
3. Discussion regarding evaluation of MR22 courses related minor degree
4. Approval for innovation business models and entrepreneurship and human values and professional ethics courses as open electives
5. Approval of open electives courses for other department.
6. Approval of Rubrics for theory subject, PPT and Poster presentation under MR22 regulations
7. Approval of course structures for re admitted students
8. Approval of list of experts in paper setting and lab examiner.
9. Any other point with the permission of BOS chairman

BOS Chairman

CSE(Internet of Things)


Maisammaguda, Dhulapally (Post. Via. Kompally), Medchal - Malkajgiri - 500 100.
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# MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

Department of CSE (Internet of Things)

**6th Board of Studies Review meeting on 07.08.2023 at 11:00 AM**

## AGENDA

The 6th Board of Studies meeting for the Departments of CSE (Internet of Things) is convened on 07.08.2023 at 11:00 AM in hybrid (online/offline) mode.

The Agenda of the meeting is as follows.

1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2022-23 on 11.02.2023.
2. Discussion and Review of B.Tech. CSE(IoT) course – 3-1 and 3-2 Schema and Syllabus (MR21 Regulations).
3. Discussion and Review of B.Tech. CSE(IoT) course – 2-1 and 2-2 Schema and Syllabus (MR22 Regulations).
4. Approval for innovation Business Models and Entrepreneurship and Human Values and Professional Ethics courses as open electives.
5. Approval for open electives courses for other department.
6. Approval of open Rubrics for theory subject, PPT and Poster presentation under MR22 regulations.
7. Approval of course structures for re-admitted students.
8. Approval of Minor Degree Course for other Departments.
9. Approval of list of experts in paper setting and lab examiner.
10. Any other point with the permission of BoS Chairman.

Dr. K. Vasanth Kumar
Chairman,
UG-B.Tech.-CSE (Internet of Things) - BOS

Head of the Department
Dept. of CSE (Internet of things)
Malla Reddy Engineering College (Autonomous)
Secunderabad, Telangana, State -500100.

# MALLA REDDY ENGINEERING COLLEGE

**(Autonomous)**

Maisammaguda, Dhullapally(post via Kompally) Secunderabad-500100

## Department of CSE (Internet of Things)

## BOS – Attendance Sheet

August 07, 2023

The 6thUG-B.Tech. CSE (Internet of Things) Board of Studies Review meeting for the Academic Year 2022-23 was conducted on 07-08-2023 at 11:00 AM through Hybrid mode (online/offline). The following BOS Members have attended the BOS Meeting to finalize MR22 regulations CSE(Internet of Things) 2ndyears III and IV Semester B.Tech. Course Structure, Syllabus, MR21 regulations CSE(Internet of Things) 3rd and 4th yearsB.Tech. Course Structure, Syllabus and other points of agenda:

| S. No | Name of the Member | Designation & Official Address | Category | Signature |
|---|---|---|---|---|
| 1 | Dr.K.Vasanth Kumar | Professor & Head of Department | Chairman | |
| 2 | Dr. K. SanthiSree | Professor& HOD, IT, JNTUH, Hyderabad. | University Nominee | |
| 3 | Dr. K. Raghu | Associate Professor, Department of CSE, SEC, Hyderabad | Subject Expert (Outside the Parent University) | |
| 4 | Dr. V RamiReddy | Associate Professor, School of CS &AI, VIT, AndhraPradesh | Subject Expert (Outside the Parent University) | |
| 5 | Mr. Aravind Varanasi | Data Scientist, Tata Consultancy Services, Hyderabad. | Industry Expert | |
| 6 | Dr.P.Srinivas | Professor | Faculty Member | |
| 7 | Mr.L.Ramu | Assistant Professor | Faculty Member | |
| 8 | Mrs.K.Sowjanya Naidu | Assistant Professor | Faculty Member | |
| 9 | Mr.S.Suman | Assistant Professor | Faculty Member | |
| 10 | Mrs.V.Anuja | Assistant Professor | Faculty Member | |
| 11 | Ms. G. Sruthi | MTS II – IT Quality Assurance, Verizon data service Pvt Ltd, Gachibowli, Hyd. | Alumni | |

Head of the Department
Dept. of CSE (Internet of things)
Malla Reddy Engineering College (Autonomous)
Hyderabad, Telangana State -500100.

**Dr.K.Vasanth Kumar**
**Chairman**
**UG-B.Tech. CSE(Internet of Things) - BOS**

# MALLA REDDY ENGINEERING COLLEGE
## (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad-500 100.

**Department of CSE (Internet of Things)**

**Minutes of the 6th BoS Review meetingUG- B.Tech.-CSE(Internet of Things) held on 07.08.2023 at 11:00 AM**

The 6th Board of Studies meeting for the **UG - B.Tech.- CSE(Internet of Things)** is conducted on 07th August, 2023 at 11:00AM in the Hybrid mode. The following members attended the BoS meeting to finalize MR22 regulations CSE(Internet of Things) 2nd years III and IV Semester B.Tech. Course Structure, Syllabus, MR21 regulations CSE(Internet of Things) 3rd and 4th years B.Tech. Course Structure, Syllabus.

| S. No | Name of the Member | Designation & Official Address | Category | Signature |
|---|---|---|---|---|
| 1 | Dr.K.Vasanth Kumar | Professor & Head of Department | Chairman | |
| 2 | Dr. K. SanthiSree | Professor& HOD, IT, JNTUH, Hyderabad. | University Nominee | |
| 3 | Dr. K. Raghu | Associate Professor, Department of CSE, SEC, Hyderabad | Subject Expert (Outside the Parent University) | |
| 4 | Dr. V RamiReddy | Associate Professor, School of CS &AI, VIT, AndhraPradesh | Subject Expert (Outside the Parent University) | |
| 5 | Mr. Aravind Varanasi | Data Scientist, Tata Consultancy Services, Hyderabad. | Industry Expert | |
| 6 | Dr.P.Srinivas | Professor | Faculty Member | |
| 7 | Mr.L.Ramu | Assistant Professor | Faculty Member | |
| 8 | Mrs.K.Sowjanya Naidu | Assistant Professor | Faculty Member | |
| 9 | Mr.S.Suman | Assistant Professor | Faculty Member | |
| 10 | Mrs.V.Anuja | Assistant Professor | Faculty Member | |
| 11 | Ms. G. Sruthi | MTS II – IT Quality Assurance, Verizon data service Pvt Ltd, Gachibowli, Hyd. | Alumni | |

**The following is the agenda for the meeting.**

1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2022-23 on 11-02-2023.
2. Discussion and Review of B.Tech. CSE(IoT) course – 3-1 and 3-2 Schema and Syllabus (MR21 Regulations).
3. Discussion and Review of B.Tech. CSE(IoT) course – 2-1 and 2-2 Schema and Syllabus (MR22 Regulations).
4. Approval for Innovation Business Models and Entrepreneurship and Human Values and Professional Ethics courses as Open Electives.
5. Approval for open electives courses for other department.
6. Approval of open Rubrics for theory subject, PPT and Poster presentation under MR22 regulations.
7. Approval of course structures for re-admitted students.
8. Approval of Minor degree courses for other department
9. Approval of list of experts in paper setting and lab examiner.
10. Any other point with the permission of BoS Chairman.

At the outset, Dr. **K.Vasanth Kumar**, Professor&HOD and Chairman of the **UG - B.Tech.- CSE(Internet of Things)** Board of Studies, welcomed the members to the BoS meeting and informed the purpose of the meeting. Later BoS Members reviewed and discussed itemsin the agenda and finally the following items have been resolved unanimously by all the members of BoS to implement from the academic year 2022-23 onwards.

**The following resolutions are approved after careful discussion and observations.**

The BoS Members have thoroughly reviewed and approved the MR22 regulations CSE(Internet of Things) 2nd years III and IV Semester B.Tech. Course Structure, Syllabus, MR21 CSE(Internet of Things) 3rd and 4th year B.Tech. Course structure, Syllabus, as per the guide lines of the AICTE, UGC and JNTUH, Hyderabad.

Action Taken Report (ATR) on previous BoS Meeting (5th) in AY 2022-23.The previous Board of studies meeting ($5^{th}$) in AY 2022-23 was held on dt: 11.02.2023.

The following are the resolutions made in the meeting and corresponding actions taken are as follows.

1. Minor Degree Courses are approved by BOS members.
2. Open Elective courses for other departments and Self department are finalized and approved.
3. Readmitted course structures approved.

Finally, Dr. K.Vasanth Kumar, Chairman – BoS has expressed his sincere thanks to all the Members of the BoS for their active participation and contribution. The meeting concluded at 12:00 Noon.

**Dr.K.Vasanth Kumar**
**Chairman,**
**UG-B.Tech.-CSE (Internet of Things) - BOS**

Head of the Department
Dept.of CSE (Internet of Things)
Malla Reddy Engineering College (Autonomous)
Secunderabad, Telangana State -500100.

# MALLA REDDY ENGINEERING COLLEGE

(AUTONOMOUS)

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Accredited by NAAC with 'A++' Grade (II-Cycle)
NBA Accredited Programmes – UG (CE, EEE, ME, ECE & CSE), PG (CE - SE, EEE – EPS, ME – TE)

EAMCET CODE: MREC

# Department of Computer Science and Engineering (IOT)

**Approved Course Structure and Syllabus for I,II,IIIand IV Years**
**B.Tech. Computer Science and Engineering (IOT) Programme.**
**(MR21 Regulations – Effective from Academic Year 2021-22 onwards)**

Estd.: 2002

Maisammaguda, Dhulapally (Post Via Kompally),
Secunderabad-500100
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JNTU Code:J4

# MALLA REDDY ENGINEERING COLLEGE(AUTONOMOUS)
# COMPUTER SCIENCE AND ENGINEERING
# (IOT)

**Course Structure for B.Tech.Computer Science and Engineering (IOT)Programme.**
**(MR21 Regulations – Effective from Academic Year 2021-22 onwards)**

| MR21 SEMESTER – I | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No | Category | Course Code | Name of the Subject | Contact hours/week | | | Credits |
| | | | | L | T | P | |
| 1. | BSC | B0B01 | Linear Algebra and Numerical Methods | 3 | 1 | - | 4 |
| 2. | BSC | B0B17 | Engineering Chemistry | 3 | 1 | - | 4 |
| 3. | ESC | B0501 | Programming for Problem Solving | 3 | - | - | 3 |
| 4. | ESC | B0301 | Engineering Graphics | 2 | - | 2 | 3 |
| 5. | BSC | B0B09 | Semiconductor Physics | 3 | 1 | - | 4 |
| 6. | ESC | B0502 | Programming for Problem Solving Lab | - | 1 | 2 | 1.5 |
| 7. | BSC | B0B11 | Applied Physics Lab | - | - | 2 | 1 |
| 8. | BSC | B0B18 | Engineering Chemistry Lab | - | - | 2 | 1 |
| | | | **Total** | **15** | **4** | **8** | **21.5** |
| | | | **Total Contact Hours** | **27** | | | |

| MR21 SEMESTER – II | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No | Category | Course Code | Name of the Subject | Contact hours/week | | | Credits |
| | | | | L | T | P | |
| 1. | HSMC | B0H01 | English | 3 | - | - | 3 |
| 2. | ESC | B0201 | Basic Electrical and Electronics Engineering | 3 | - | - | 3 |
| 3. | BSC | B0B02 | Probability and Statistics | 3 | - | - | 3 |
| 4. | ESC | B0504 | Python Programming | 3 | 1 | - | 4 |
| 5. | ESC | B0506 | Python Programming Lab | - | 1 | 2 | 2 |
| 6. | HSMC | B0H02 | English Language and Communication Skills Lab | - | - | 2 | 1 |
| 7. | ESC | B0202 | Basic Electrical and Electronics Engineering Lab | - | - | 2 | 1 |
| 8. | ESC | B1201 | Engineering and IT Workshop | - | - | 2 | 1.5 |
| | | | **Total** | **12** | **2** | **8** | **18.5** |
| | | | **Total Contact Hours** | **22** | | | |

# MALLA REDDY ENGINEERING COLLEGE(AUTONOMOUS)
## COMPUTER SCIENCE AND ENGINEERING
## (IOT)
### Course Structure for B.Tech.Computer Science and Engineering (IOT)Programme.
### (MR21 Regulations – Effective from Academic Year 2021-22 onwards)

**MR21 SEMESTER-III**

| S. No | Category | Course Code | Course Title | L | T | P | Credits |
|---|---|---|---|---|---|---|---|
| 1 | PCC | B0507 | Discrete Mathematics | 3 | - | - | 3 |
| 2 | PCC | B0508 | Computer Organization and Architecture | 3 | - | - | 3 |
| 3 | PCC | B0509 | Data Structures | 3 | - | - | 3 |
| 4 | PCC | B0450 | Microprocessors and MicrocontrollersFoundations | 3 | - | - | 3 |
| 5 | PCC | B0510 | Object Oriented Programming | 3 | - | - | 3 |
| 6 | PCC | B0512 | Data Structures Lab | - | - | 3 | 1.5 |
| 7 | PCC | B0451 | Microprocessors and MicrocontrollersFoundations Lab | - | 1 | 2 | 2 |
| 8 | PCC | B0513 | Object Oriented Programming Lab | - | - | 3 | 1.5 |
| 9 | MC | B00M1 | Gender Sensitization | - | - | 2 | - |
| | | | **Total** | **15** | **1** | **12** | **20** |
| | | | **Total Contact Hours** | **28** | | | |

**MR21 SEMESTER-IV**

| S. No | Category | Course Code | Course Title | L | T | P | Credits |
|---|---|---|---|---|---|---|---|
| 1 | BSC | B0B07 | Applied Statistics and Optimization Techniques | 3 | - | - | 3 |
| 2 | PCC | B0515 | Database Management Systems | 3 | - | - | 3 |
| 3 | PCC | B0516 | Design and Analysis of Algorithms | 3 | - | - | 3 |
| 4 | PCC | B6901 | Internet of Things Fundamentals | 3 | - | - | 3 |
| 5 | **Professional Elective –I** | | | | | | |
| | PEC - I | B6601 | Fundamentals of Artificial Intelligence | 3 | - | - | 3 |
| | | B0518 | Free and OpenSourceTechnologies | | | | |
| | | B6902 | Object Oriented Analysis and Design | | | | |
| 6 | PCC | B0520 | Database Management Systems Lab | - | 1 | 2 | 2 |
| 7 | PCC | B0521 | Design and Analysis of Algorithms Lab | - | - | 3 | 1.5 |
| 8 | PCC | B6903 | Internet of Things Fundamentals Lab | - | - | 3 | 1.5 |
| 9 | MC | B00M2 | Environmental Science | 2 | - | - | - |
| | | | **Total** | **17** | **1** | **8** | **20** |
| | | | **Total Contact Hours** | **26** | | | |

# MALLA REDDY ENGINEERING COLLEGE(AUTONOMOUS)
## COMPUTER SCIENCE AND ENGINEERING
## (IOT)
### Course Structure for B.Tech.Computer Science and Engineering (IOT)Programme.
### (MR21 Regulations – Effective from Academic Year 2021-22 onwards)

| MR21 SEMESTER-V | | | | | | | |
|---|---|---|---|---|---|---|---|
| S.No | Category | Course Code | Course Title | L | T | P | Credits |
| 1 | HSMC | B0H09 | Management Fundamentals | 3 | - | - | 3 |
| 2 | PCC | B0511 | Operating Systems | 3 | - | - | 3 |
| 3 | PCC | B6208 | Automata and Compiler Design | 3 | - | - | 3 |
| 4 | PCC | B6904 | Applications of IoT | 3 | - | - | 3 |
| 5 | Professional Elective –II | | | | | | |
| | PEC-II | B0525 | Advanced Databases and security | 3 | - | - | 3 |
| | | B6714 | Advanced Artificial Intelligence | | | | |
| | | B0527 | Semantic Web | | | | |
| | | B6201 | Computer Networks | | | | |
| | | B0522 | Computer Graphics | | | | |
| 6 | Professional Elective –III | | | | | | |
| | PEC-III | B0532 | Distributed Systems | 3 | - | - | 3 |
| | | B0533 | Animation Techniques | | | | |
| | | B6905 | IoT for Architects | | | | |
| | | B0526 | Cloud Computing | | | | |
| | | B0517 | Mobile Application Development | | | | |
| 7 | PCC | B0514 | Operating Systems Lab | - | - | 3 | 2 |
| 8 | PCC | B6906 | Applications of IoT Lab | - | - | 3 | 1 |
| 9 | MC | B00M3 | Quantitative Aptitude &VR – I | 2 | - | - | - |
| | | | **Total** | **20** | **-** | **6** | **21** |
| **Total Contact Hours :26** | | | | | | | |

| MR21 SEMESTER-VI | | | | | | | |
|---|---|---|---|---|---|---|---|
| **S.No** | **Category** | **Course Code** | **Course Title** | **L** | **T** | **P** | **Credits** |
| 1 | HSMC | B0H08 | Engineering Economics and Accountancy | 3 | - | - | 3 |
| 2 | PCC | B6910 | IoT Cloud and Data Analytics | 3 | - | - | 3 |
| 3 | PCC | B0545 | Data Mining | 3 | - | - | 3 |
| 4 | **Professional Elective -IV** | | | | | | |
| | PEC-IV | B1209 | Information Retrieval | 3 | - | - | 3 |
| | | B6203 | Cryptography and Network Security | | | | |
| | | **B0524** | **Software Engineering & Modeling** | | | | |
| | | B0529 | Scripting Languages | | | | |
| | | B0540 | Ad-hoc & Sensor Networks | | | | |
| 5 | **Professional Elective -V** | | | | | | |
| | PEC-V | B6615 | Mobile Computing | 3 | - | - | 3 |
| | | B0537 | Natural Language Processing | | | | |
| | | **B0546** | **Block chain Technologies** | | | | |
| | | B6705 | Python for Data Science | | | | |
| | | B0558 | Software Quality Assurance and Testing | | | | |
| 6 | HSMC | B0H03 | English Communication and Presentation Skills Lab | - | - | 2 | 1 |
| 7 | PCC | B6913 | IoT Cloud and Data Analytics Lab | - | - | 3 | 1 |
| 8 | PCC | B0544 | Data Mining Lab | - | - | 3 | 2 |
| 9 | MC | B00M4 | Quantitative Aptitude and Verbal Reasoning – II | 2 | - | - | - |
| | | | **Total** | **17** | **-** | **8** | **19** |
| **Total Contact Hours :25** | | | | | | | |

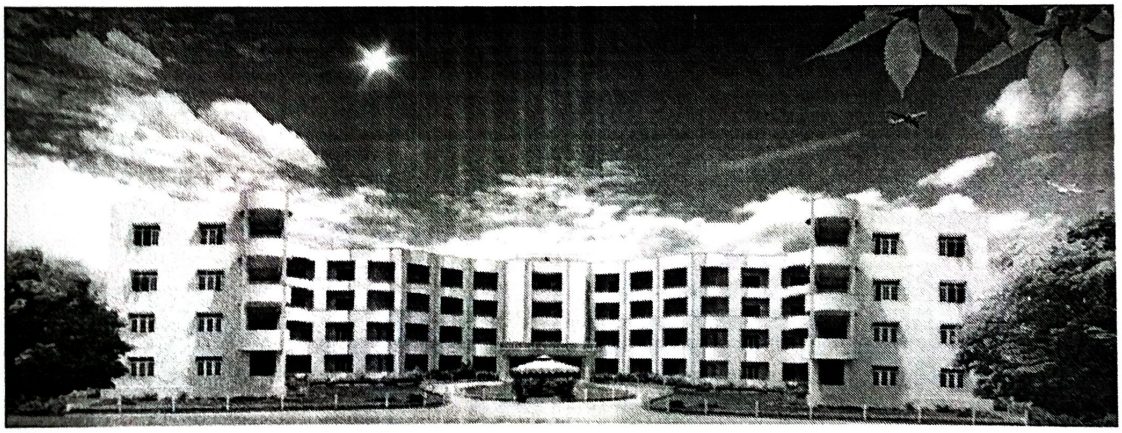
| MR21 SEMESTER-VII | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No. | Category | Course Code | Name of the Course | Contact Hours / week | | | Credits |
| | | | | L | T | P | |
| 1 | PCC | B6915 | Edge Analytics | 3 | - | - | 4 |
| 2 | PCC | B1210 | Machine Learning | 3 | - | - | 3 |
| 3 | PCC | B6217 | Cyber Security | 3 | - | - | 3 |
| 4 | **Professional Elective-VI** | | | | | | |
| | PEC-VI | B0554 | Data Science | 3 | - | - | 3 |
| | | B0555 | Deep Learning | | | | |
| | | B0556 | Social Networking | | | | |
| | | B0557 | Human Computer Interaction | | | | |
| | | B0558 | Software Quality Assurance and Testing | | | | |
| 5 | OEC-I | | **Open Elective-I** | 3 | - | - | 3 |
| 7 | PCC | B6916 | Edge Analytics Lab | - | - | 2 | 1 |
| 8 | PCC | B1215 | Machine Learning Lab | - | - | 2 | 2 |
| 9 | PRJ | B00P1 | Internship/Mini Project | | | 4 | 2 |
| **Total** | | | | 15 | - | 8 | 21 |
| **Total Contact Hours** | | | | 23 | | | |

| MR21 SEMESTER-VIII | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No. | Category | Course Code | Name of the Course | Contact Hours / week | | | Credits |
| | | | | L | T | P | |
| 1 | OEC-II | | Open Elective -II | 3 | - | - | 3 |
| 2 | OEC-III | | Open Elective -III | 3 | - | - | 3 |
| 3 | PRJ | B00P3 | Seminar | - | - | 2 | 1 |
| 4 | PRJ | B00P2 | Major Project | - | - | 24 | 12 |
| **Total** | | | | 6 | - | 26 | 19 |
| **Total Contact Hours** | | | | 26 | | | |

# ACADEMIC REGULATIONS, COURSE STRUCTURE AND DETAILED SYLLABUS

## Effective from the Academic Year 2022-23 onwards

**Course Structure and II Year Syllabus**
**for**
**B.Tech. CSE (Internet of Things) Programme.**
**(MR22 Regulations – Effective from Academic Year 2022-23 onwards)**



**For**

# B.Tech. - Four Year Degree Programme


## MALLA REDDY ENGINEERING COLLEGE

(An UGC Autonomous Institution, Approved by AICTE and Affiliated to JNTUH, Hyderabad)
Recognized under section 2(f) &12 (B) of UGC Act 1956, Accredited III Cycle by NAAC with 'A++' Grade, NIRF Rank Band 201-250, ARIIA Band Performer, NBA Tier-I Accredited (B.Tech.- CE, EEE, ME, ECE &CSE, M.Tech. - SE, EPS, TE)
Maisammaguda (H), Dhulapally (Post Via Kompally), Medchal - Malkajgiri District, Secunderabad– 500100.
Telangana State. e-mail: principal@mrec.ac.in, Website: www.mrec.ac.in

# MALLA REDDY ENGINEERING COLLEGE (Autonomous)
## COURSE STRUCTURE – B.Tech. CSE (Internet of Things) Programme.
## (MR22 Regulations - Effective from Academic Year 2022 – 23 onwards)

| MR22 SEMESTER – I | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No | Category | Course Code | Name of the Subject | Contact hours/week | | | Credits |
| | | | | L | T | P | |
| 1. | BSC | C0B01 | Linear Algebra and Numerical Methods | 3 | 1 | - | 4 |
| 2. | BSC | C0B17 | Engineering Chemistry | 3 | 1 | - | 4 |
| 3. | ESC | C0501 | Programming for Problem Solving | 3 | - | - | 3 |
| 4. | ESC | C0305 | Engineering Drawing | 2 | - | 2 | 3 |
| 5. | BSC | C0B09 | Semiconductor Physics | 3 | 1 | - | 4 |
| 6. | ESC | C0502 | Programming for Problem Solving Lab | - | - | 2 | 1 |
| 7. | BSC | C0B11 | Applied Physics Lab | - | - | 2 | 1 |
| 8. | BSC | C0B18 | Engineering Chemistry Lab | - | - | 2 | 1 |
| | | | **Total** | **14** | **3** | **8** | **21** |
| | | | **Total Contact Hours** | **25** | | | |

| MR22 SEMESTER – II | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No | Category | Course Code | Name of the Subject | Contact hours/week | | | Credits |
| | | | | L | T | P | |
| 1. | HSMC | C0H01 | English | 3 | - | - | 3 |
| 2. | ESC | C0201 | Basic Electrical and Electronics Engineering | 3 | - | - | 3 |
| 3. | BSC | C0B02 | Probability and Statistics | 3 | - | - | 3 |
| 4. | ESC | C0504 | Python Programming | 3 | 1 | - | 4 |
| 5. | ESC | C0506 | Python Programming Lab | - | - | 2 | 2 |
| 6. | HSMC | C0H02 | English Language and Communication Skills Lab | - | - | 2 | 1 |
| 7. | ESC | C0202 | Basic Electrical and Electronics Engineering Lab | - | - | 2 | 1 |
| 8. | ESC | C1201 | Engineering and IT Workshop | - | - | 2 | 2 |
| | | | **Total** | **12** | **1** | **8** | **19** |
| | | | **Total Contact Hours** | **21** | | | |

| MR22 III SEMESTER | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No | Category | Course Code | Course Title | L | T | P | Credits |
| 1 | PCC | C0507 | Discrete Mathematics | 3 | - | - | 3 |
| 2 | PCC | C0509 | Computer Organization and Architecture | 3 | - | - | 3 |
| 3 | PCC | C0510 | Data Structures | 3 | - | - | 3 |
| 4 | PCC | C0409 | Sensors & Devices | 3 | - | - | 3 |
| 5 | PCC | C0511 | Object Oriented Programming through Java | 3 | - | - | 3 |
| 6 | PCC | C0512 | Data Structures Lab | - | - | 3 | 1.5 |
| 7 | PCC | C6914 | Sensors & Devices Lab | - | 1 | 2 | 2 |
| 8 | PCC | C0513 | Object Oriented Programming through Java Lab | - | - | 3 | 1.5 |
| 9 | MC | C00M1 | Gender Sensitization | - | - | 2 | - |
| | | | **Total** | **15** | **1** | **10** | **20** |
| **Total Contact Hours** | | | | **26** | | | |

| MR22 IV SEMESTER | | | | | | | |
|---|---|---|---|---|---|---|---|
| S. No | Category | Course Code | Course Title | L | T | P | Credits |
| 1 | BSC | C0B23 | Number Theory | 3 | - | - | 3 |
| 2 | PCC | C0515 | Database Management Systems | 3 | - | - | 3 |
| 3 | PCC | C0517 | Design and Analysis of Algorithms | 3 | - | - | 3 |
| 4 | PCC | C6901 | Internet of Things Fundamentals | 3 | - | - | 3 |
| 5 | **Professional Elective –I** | | | | | | |
| | PEC-I | **C6601** | **Fundamentals of Artificial Intelligence** | 3 | - | - | 3 |
| | | C0518 | Free and Open SourceTechnologies | | | | |
| | | C6902 | Object Oriented Analysis and Design | | | | |
| 6 | PCC | C0519 | Database Management Systems Lab | - | - | 2 | 1 |
| 7 | PCC | C1204 | Design and Analysis of Algorithms Lab | - | - | 3 | 1 |
| 8 | PCC | C6903 | Internet of Things Fundamentals Lab | - | - | 3 | 1 |
| 9 | PCC | C6921 | Real-time Research Project/ Societal Related Project | - | - | 2 | 1 |
| 10 | PCC | C0522 | Node JS/ React JS/ Django Lab | - | - | 2 | 1 |
| 11 | MC | C00M2 | Environmental Science | 2 | - | - | - |
| | | | **Total** | **17** | **-** | **12** | **20** |
| | | | **Total Contact Hours** | **29** | | | |