

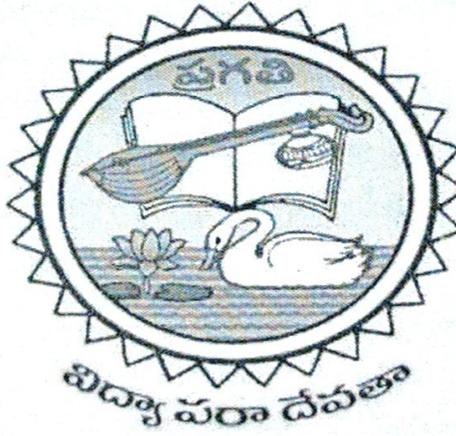
R23 COURSE STRUCTURE AND SYLLABUS

for

III B.Tech.

CSE (CYBER SECURITY)

(Applicable for batches admitted from 2023-24)



PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

Permanently Affiliated to JNTUK, Kakinada, Accredited by NAAC with "A" Grade

Recognized by UGC 2(f) and 12(b) under UGC act, 1956

1-378, ADB Road, Surampalem – 533 437 Near Peddapuram, E.G.Dist, Andhra Pradesh



PRAGATI ENGINEERING COLLEGE

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DEPARTMENT OF CSE (CYBER SECURITY)

Agenda:

1. Welcome Address by BoS-Chairman
2. Ratification of III-year course structure and syllabi of R-23 regulation for B.Tech program
3. Discussion of Ratification of Course Objectives, Course Outcomes, and CO - PO mapping for each course
4. Finalization of text books and reference books
5. Ratification of interdepartmental courses offered by CSE-CS department of R-23 regulation for III year
6. Discussion of Ratification of new courses
7. Inclusion of MOOCs courses in Program Elective approved by BoS
8. Discussion of Action Taken Report from stakeholders
9. Any other item



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Minutes of Second BoS Meeting conducted on 13-08-2025

RESOLUTIONS:

1. WRT to Point No. 2 of Agenda -

1. It was resolved to schedule the course “**Introduction to Cyber Security**” in III B.Tech II Semester and the course “**Cryptography and Network Security**” in III B.Tech I Semester in the curriculum.
2. In III B.Tech II Semester, “**Introduction to Cyber Security**” course, under **Unit II**, it is suggested to include few topics like Types of Data, Digital rights in Unit II, Introduction to Footprinting Methodologies, Fundamentals of Vulnerability Analysis, OWASP Top 10 Web Application Security Risks in Unit III.

2. WRT to Point No. 3 of Agenda -

The Members suggested to change CO-PO mapping table for the subject “**Cyber Crimes & Digital Forensics**”.

3. WRT to Point No. 4 of Agenda -

The Members reviewed and ratified the text books and reference books offered by CSE (CS) department of R-23 regulation for III year.

4. WRT to Point No. 5 of Agenda -

The Members ratified the interdepartmental courses offered by CSE (CS) department of R-23 regulation for III year.

5. WRT to Point No. 6 of Agenda -

The Members ratified the new courses offered by CSE (CS) department of R-23 regulation for III year.

6. WRT to Point No. 7 of Agenda -

1. The members ratified the **12-Week SWAYAM NPTEL (MOOCs)** courses offered by the **CSE (CS) Department** under the **R-23 regulation** for III Year. It was suggested to replace the **III Year I Semester** course “**Generative AI for Everyday Life**” with “**Mathematical Foundations of Machine Learning**”, and the **III Year II Semester** course “**Mathematical Foundations of Machine Learning**” with “**Learning Analytical Tools**”.
2. It was further ratified that the BoS Chairman is authorized to shortlist or select the courses in the Swayam NPTEL(MOOCs) list.

7. WRT to Point No. 8 of Agenda -

Based on the ATR, the suggestions given by the stakeholders are included

- a) “**Entrepreneurship and Venture Creation**” course has been introduced in III B.Tech I Semester as an Open Elective.
- b) “**Salesforce**” course has been incorporated into the regular curriculum as a Skill Enhancement Course, with Salesforce Administrator Explorer offered in III B.Tech I Semester and Salesforce Developer Catalyst offered in III B.Tech II Semester.

The meeting ended with Vote of Thanks.



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| S.No. | Name | Signature |
|-------|---|----------------------------|
| 1 | Mrs. T Ganga Bhavani (Chairman) Asst. Professor & HOD – Dept. of CSE (CS) | |
| 2 | Dr. E. Suneetha , Asst. Professor, Department of CSE, UCEK, JNTUK, Kakinada | |
| 3 | Dr. S.D.V.Prasad Associate professor, Department of CSE, GITAM, Hyderabad | Approved through online |
| 4 | Sri Chaitanya Emany, Information Protection Manager, Evernorth Services | Approved through online |
| 5 | Mr. M Mani Shankar Asst. Professor, Dept. of CSE (CS) | M.M. Shankar. |



PRAGATI ENGINEERING COLLEGE

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DEPARTMENT OF CSE (CYBER SECURITY)

R23 COURSE STRUCTURE

III YEAR – I SEMESTER

| S.No. | Category | Title | L | T | P | C |
|----------------------|--------------------------------------|--|-----------|----------|-----------|-----------|
| 1 | Professional Core | Cloud Computing | 3 | 0 | 0 | 3 |
| 2 | Professional Core | Cryptography and Network Security | 3 | 0 | 0 | 3 |
| 3 | Professional Core | Automata Theory and Compiler Design | 3 | 0 | 0 | 3 |
| 4 | Professional Elective - I | 1. Software Engineering 2. Wireless Sensor Networks 3. Artificial Intelligence 4. Internet of Things 5. Any one of 12-Week Swayam NPTEL (MOOCs) * i. Mathematical Foundations of Machine Learning ii. Privacy and Security in Online Social Media iii. Foundations of Virtual Reality | 3 | 0 | 0 | 3 |
| 5 | Open Elective-I | 1. Construction Project Management 2. Renewable Energy Sources 3. Sustainable Energy Technologies 4. Electronics Devices & Circuits 5. Entrepreneurship and Venture Creation | 3 | 0 | 0 | 3 |
| 6 | Professional Core | Cloud Computing Laboratory | 0 | 0 | 3 | 1.5 |
| 7 | Professional Core | Cryptography and Network Security Laboratory | 0 | 0 | 3 | 1.5 |
| 8 | Skill Enhancement course | Full Stack Development-2 / Salesforce Administrator Explorer | 0 | 1 | 2 | 2 |
| 9 | Engineering Science | User Interface Design Using Flutter | 0 | 0 | 2 | 1 |
| 10 | Community Service Project Internship | | - | - | - | 2 |
| Total credits | | | 15 | 1 | 10 | 23 |

* BoS Chairman is authorized to shortlist or select the courses in the Swayam NPTEL (MOOCs) list.

Members of BoS:

| | | | | |
|--------------------------|---------------------------------------|---|---------------------------------------|--|
| | Approved through online | Approved through online | | M. M. Shankar |
| Dr. E Suneetha, JNTUK | Dr. S D V Prasad, GITAM, Hyderabad | Sri. Chaitanya Emany, Evernorth Services | Mrs. T Ganga Bhavani, BoS-Chairman | Mr. M Mani Shankar, Assistant Professor |



PRAGATI ENGINEERING COLLEGE

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III YEAR – II SEMESTER

| S.No. | Category | Title | L | T | P | C |
|---|---------------------------|--|-----------|----------|----------|-----------|
| 1 | Professional Core | Cyber Crimes and Digital Forensics | 3 | 0 | 0 | 3 |
| 2 | Professional Core | Introduction to Cyber Security | 3 | 0 | 0 | 3 |
| 3 | Professional Core | Machine Learning | 3 | 0 | 0 | 3 |
| 4 | Professional Elective–II | 1. Software Testing Methodologies 2. DevOps 3. Microprocessors and Microcontrollers 4. Applied Cryptography 5. Any one of 12-Week Swayam NPTEL (MOOCs) * i. Responsible and Safe AI Systems ii. Social Network Analysis iii. Advanced Distributive Systems | 3 | 0 | 0 | 3 |
| 5 | Professional Elective–III | 1. Software Project Management 2. Mobile Adhoc Networks 3. Natural Language Processing 4. Security Assessment and Risk Analysis 5. Any one of 12-Week Swayam NPTEL (MOOCs)* i. Introduction to Large Language Model (LLMs) ii. Deep Learning for Computer Vision iii. Learning Analytical Tools | 3 | 0 | 0 | 3 |
| 6 | Open Elective – II | 1. Disaster Management 2. Additive Manufacturing 3. Principles of Communications 4. Fundamentals of Electric Vehicles | 3 | 0 | 0 | 3 |
| 7 | Professional Core | Cyber Security Laboratory | 0 | 0 | 3 | 1.5 |
| 8 | Professional Core | Cyber Crimes and Digital Forensics Laboratory | 0 | 0 | 3 | 1.5 |
| 9 | Skill Enhancement course | Softskills OR IELTS / Salesforce Developer Catalyst | 0 | 1 | 2 | 2 |
| 10 | Audit Course | Technical Paper Writing & IPR | 2 | 0 | 0 | - |
| Total credits | | | 20 | 1 | 8 | 23 |
| Mandatory Industry Internship of 08 weeks duration during summer vacation | | | | | | |

* BoS Chairman is authorized to shortlist or select the courses in the Swayam NPTEL (MOOCs) list.

Members of BoS:

| | | | | |
|--------------------------|---------------------------------------|---|---------------------------------------|--|
| | Approved through online | Approved through online | | |
| Dr. E Suneetha, JNTUK | Dr. S D V Prasad, GITAM, Hyderabad | Sri. Chaitanya Emany, Evernorth Services | Mrs. T Ganga Bhavani, BoS-Chairman | Mr. M Mani Shankar, Assistant Professor |