

# Cyber Security – Fundamentals with tools and techniques for defense

Faculty

Dr. Harish Ramani

Mohan Ram C

&

TA

Balaji Sankapal

# Intro to Dr. Harish Ramani

- Dr. Harish Ramani, M.Sc | Ph.D (Australia) |  
CEH | CND | CHFI | ECSA | CEI | ISO 9001:2015 IA
- 15+ years of experience in Cyber Security
- Taught over 3000 students in formal certifications related to Cyber Security
- Conducts Regular training courses in Schools and Colleges to build awareness and skills for budding professionals
- Visiting faculty for IIIT Sri City, IIT Madras online courses (CCW, CB2W, CCE...)

# Introduction to Mohan Ram C

- IT professional with 38 years of experience
- Past 14 years working on the safety and security of Critical Infrastructure (Nuclear plants, Refineries, Power plants and other Digital Assets cyber infrastructure etc.)
- Specialist on Physical security and controls using IOT and related integration with Analytics is area of specialisation / focus, besides running various corporate programs for improving cyber security
- Visiting faculty for IIIT Sri City, IIT Madras online courses (CCW, CB2W, CCE...)

# Course Objectives

- It is comprehensive basic course to learn the most effective steps to prevent attacks and detect adversaries with actionable techniques that one can directly apply when they get to use these tools and techniques.
- Also, this course sets basic knowledge for any advanced topics for specialization the students wish to pursue as a career in Cyber Security

# Overview of Career Prospects in Cyber Security

- Build a lucrative and futuristic career in the field of Cyber Security (on date at salaries are peaking to premium, as India / World goes Digital way ...).
- According to NASSCOM, the estimated demand for security workforce to rise globally to six million in next 2 years, up from 4 million in 2015, with projected shortfall of 1.5 million
- Ethical Hackers demand is increasing multi-fold

# Course plan / content

|  |           |
|--|-----------|
| • Introduction To Cyber Security & Fundamentals                  | 6         |
| • Physical Security  | 6         |
| • Introduction To Network Security                               | 3         |
| • Introduction to Risk Assessment                                | 3         |
| • Introduction to Network Devices and Technologies               | 3         |
| • Digital Forensics  | 3         |
| • Application Security   | 3         |
| • Lab / Practical / Hands-on                                     | 15        |
| <b>Total</b>   | <b>42</b> |
| • Cases studies will be provided                                 |           |
| • LMS will have the slide deck for reference and further studies |           |

# Assessment plan

|                                      | Marks |
|--------------------------------------|-------|
| • Mid-sem exam (proctored)           | 30    |
| • End-Sem exam (proctored)           | 30    |
| • Assignments – 2                    | 20    |
| • Practical – Cyber Bay tasks submit | 15    |
| • Attendance                         | 5     |

^Assess your laptops and arrange to make it work for Practical / hands-on

# Course schedule

- Classes for this course, will be start on 5<sup>th</sup> January 2024 and end on 3<sup>rd</sup> May 2024.
  - Timing – every Friday 14.00 hrs. to 17.15 hrs. (with a 15 min Break in-between)
  - We will have 2 or 3 extended sessions – hands-on / practical (including crimping)
    - 26<sup>th</sup> Jan and 8<sup>th</sup> March are Holidays
    - 9<sup>th</sup> Feb and 22<sup>nd</sup> March – NID – with compensatory class on 17<sup>th</sup> Feb and 30<sup>th</sup> March
  - Mid-Term break – 11<sup>th</sup> March to 17<sup>th</sup> March
- Mid-Term Examination – 8<sup>th</sup> March, 2024
- End-Term Examination – 10<sup>th</sup> May, 2024



# Our contacts

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- We will form a WhatsApp group – a official medium for any communication

# Clarification of Doubts + Discussions