Abstract Content: This course discusses the techniques used to attack hosts and networks, and mechanisms to mitigate security threats against systems. Topics include operating system security, viruses, intrusion detection, firewalls, and database security. It also covers security issues in programming including buffer overflows, format string bugs, integer overflows, and race conditions; SQL injection attacks; Web security exploits including cross-site scripting; phishing attacks.

Prerequisites: Open to B.Tech. Sem VIII and M.Tech. Sem II only.

References:

- Computer Security: Art and Science – Bishop, [Addison-Wesley].
- Computer Security – Gollman, [Wiley].
- Computer System Security – Avoine, Junod and Oechslin, [EPFL Press].

Evaluation:

- In-semester exams (at least one, possibly two): 30%
- End-sem exam: 30%
- Assignments/Quizzes: 20%
- Labs: 20%