

**Completed Registration form should be sent to  
Course coordinator:**

Prof. G. Sivakumar  
Course Coordinator  
Department of Computer Science & Engineering  
Indian Institute of Technology Bombay  
Powai, Mumbai – 400 076  
Phone: (022) – 25767725 (email is preferred)  
Fax: (022) – 25720022  
Email: [isrdc.iitb.cybersec@gmail.com](mailto:isrdc.iitb.cybersec@gmail.com)

**Deadline for application: April 15<sup>th</sup>, 2017  
Notification of acceptance: April 20<sup>th</sup>, 2017**

- Incomplete application forms will not be entertained.
- For additional copies of the registration form, use a photocopy of this brochure or type in the format given. For further details: <http://www.iitb.ac.in/~qip/>

### **FACULTY**

The teaching faculty in this course consists of Prof. G. Sivakumar, Prof. Bernard Menezes, and Prof. RK Shyamasundar. We are in the process of inviting other experts. Updates will be made available on course's website.

### **VENUE FOR CLASSES**

Classes will be held in the Seminar Hall of Jalvihar Guest House, IIT Bombay.

### **LECTURE NOTES**

In order to help the participants to understand the concepts better, the lecture notes along with a summary of the contents will be provided at the beginning of each lecture.

### **PRE-REQUISITES**

The course does not have any formal pre-requisites. However, familiarity with basic understanding of cryptography, networks, and operating systems will be helpful. Shortlisted candidates will be sent more information about preparatory material.

## QIP Short Term Course On

**Tools for Cyber Security: A Laboratory Course  
(CyberSec\_17)**

MAY 22 – 26, 2017



Office of  
Continuing Education &  
Quality Improvement Programmes



Information Security Research and Development  
Center, IIT Bombay (ISRDC)  
<http://isrdc.iitb.ac.in/cybersec>

Department of Computer Science and  
Engineering, IIT Bombay.

***For information on other Quality  
Improvement Programmes at IITB, contact:***  
PROF-IN-CHARGE (CE & QIP),  
OFFICE OF CONTINUING EDUCATION & QUALITY  
IMPROVEMENT PROGRAMMES  
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY,  
POWAI, MUMBAI 400 076  
Tel. No. : 2572 6199 (D), 2576 7048.  
Email : [qip@iitb.ac.in](mailto:qip@iitb.ac.in)

**For latest information on QIP,  
Please visit our home page at: <http://www.qip.iitb.ac.in>**

## INTRODUCTION

Security and privacy of information has become a crucial aspect of our digital world. Smooth functioning of organizations, governments, nations and the global economy hinges on security of underlying digital infrastructure. A practitioner of security not only needs to know the theory and science of security but also needs to be equally fluent in security engineering. Practice of security engineering has been impeded due to 3 main reasons: knowledge of tools, access to core infrastructure of Internet (like DNS, Mail server, routers), and potential retribution from authorities if usage of tools goes awry. In order to address these shortcomings, this laboratory course will introduce the participants to security tools in 3 broad categories: offensive tools, defensive mechanisms, forensic tools. To reproduce the experiments in laboratories, attendees will be taught to deploy a safe virtualized environment.

## BROAD OBJECTIVES

This course aims at exposing the participants to principles of information security, and a set of tools that is necessary to understand those principles. The course will consist of hands-on sessions on the use of prominent open-source security tools. Participants will be guided through these tools' usage and utility. Towards the end of this course, design and architecture of "Virtual Laboratory for Security Experimentation" framework will be

presented to the audience. This framework will allow a student of security engineering to setup a virtual, private laboratory in which real world security concepts/scenarios could be *easily* simulated. The workshop will conclude with a round-table in which feedback from participants is expected on the VLSE framework and how VLSE could further be extended across institutes as a national VLSE (nVLSE).

## COURSE CONTENTS

Wireshark, OpenVAS, Metasploit-framework, Armitage, metagoofil, ZAP, hydra, nikto, ostinato, ettercap, W3AF, ngrep, Haka, BeEF, tcpextract, Sleuth Kit, volatility, tinymoney, mitmproxy, sslstrip, binwalk, doona, vusb-analyzer, xplico, vega, skipfish, fnotifystat, portsentry, p0f, truecrypt, rkhunter, iptables, snort, nmap, arp, lynis, etc.

This is a representative list of tools. Actual set of tools will be available on course web-site in due time.

## ELIGIBILITY

Faculty members of degree level engineering colleges recognized by AICTE are eligible to attend the course.

## TRANSPORT, BOARDING & LODGING

Participants are entitled for II class or III AC railway fare to and fro by the shortest route from college to IIT Bombay. All participants will be given auto rickshaw fare from Kanjurmarg/Andheri to IIT on the dates of arrival and departure. Local participants will be paid second class railway fare or BEST Bus fare.

Boarding and lodging will also be provided free of cost. Accommodation will be provided in the students Hostels or Guest House on sharing basis. Since accommodation is limited, family members of the participants cannot be accommodated.

## REGISTRATION

There is no registration fee for the course. All short-listed candidates are required to confirm their participation by sending a Demand Draft of ₹.2000/- in the name of "Registrar IIT Bombay".

The above amount will be refunded to the participant if he/she attends the course. In case a participant does not attend the course, the above amount will be forfeited.

## COURSE SCHEDULE & EVALUATION

The programme is scheduled to be held during May 08-12, 2017. Successful participants would be awarded 'Course Completion Certificate'.

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Designation : \_\_\_\_\_

Organization : \_\_\_\_\_

\_\_\_\_\_

Mailing Address : \_\_\_\_\_

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Age : \_\_\_\_\_ Sex ( M/F): \_\_\_\_\_

Mobile : \_\_\_\_\_

Email : \_\_\_\_\_

Prior Exposure to Security: Yes / No

*Accommodation in Campus: YES / NO*

Signature of Applicant:

Sponsorship & signature of Head of the College /  
Institute (with date & seal).

**(IMPORTANT: BY SIGNING ABOVE HEAD OF THE COLLEGE/INSTITUTE CERTIFIES THAT APPLICANT IS A FACULTY MEMBER OF DEGREE LEVEL ENGINEERING COLLEGE RECOGNIZED BY AICTE)**

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