



ONE WEEK SHORT TERM COURSE ON

# Secure Information Technology

(18<sup>th</sup> Dec 2017 to 23<sup>rd</sup> Dec 2017)

Due to the continuous increase of the world reliance on information technology and internet communications, computer security is becoming the first line of defense against fraud perpetrators and security hackers. The integration among software enterprises and their increasing spread across the Web infrastructures introduced new challenges to computer security. New attacks and fraudulent acts are carried out every day threatening our system and data confidentiality, integrity, and availability. Depending on the system role in everyday life, the cost of insecure design or unprotected environment can sometimes be unaffordable. The knowledge about technology assets, valuation of their risks, and the awareness about their possible attack methods are the first step towards successful security protection measures. Security protection implies taking measures to detect and prevent attacks from unauthorized disclosure, modification, or withholding of information resources.

In this course, we will present the latest security threats and malicious acts for information technology and describe the state-of-the-art mechanisms for protecting against them. We will cover a collection of attacks and fraudulent acts in different technology tiers including system, software, communication, network, and web applications. For each attack, we will describe the environment, objectives, methods, and the countermeasures considering the prevention of, detection of, reaction against, and recovering from this attack. Examples of common attacks include malware, password guessing, buffer overflow, denial of service, code injection, cash poisoning, cross site scripting, and malicious activities (or intrusions). In addition to these attacks, we will cover several other severe attacks and security threats that concern every application developer, system administrator, general internet user, and many others.

<b>Modules</b>	<ul style="list-style-type: none"> <li>➤ Secure Software and Systems</li> <li>➤ Secure Communications</li> <li>➤ Secure Web Technology</li> </ul>
<b>You Should Attend If...</b>	<ul style="list-style-type: none"> <li>➤ You are an undergraduate and a graduate student in Computer Sciences or Engineering.</li> <li>➤ You are a faculty of Science and Engineering interested in the field of cyber security.</li> <li>➤ You are a post-doctoral fellow, PhD scholar, or researcher.</li> <li>➤ You are a systems engineer, software designer, or a Web developer.</li> <li>➤ You are a system or network administrator.</li> <li>➤ You are an Information Technology Stakeholder or online business owner.</li> </ul> <p>Number of participants for the course will be limited to fifty.</p>

## Fees

The participation fees for taking the course is as follows:

- NIT Kurukshetra Faculty and Students: INR 1000
- Faculty from other recognized educational institutions: INR 2000
- Students from other recognized educational institutions: INR 1000
- Members of Government Research Organizations: INR 3000
- Members of Industry/Private Research Institution: INR 4000
- Participants from abroad: US \$300

Registration fee only includes attendance to sessions, course material and lecture notes; laboratory equipment usage charges; and 24 hr. free internet facility. The course fee does not include accommodation. However, the participants will be provided accommodation on payment basis in the institute guest house based on availability. For any questions please send an email to [jasarika@nitkkr.ac.in](mailto:jasarika@nitkkr.ac.in)

## The Faculty



Dr. Atef Shalan, College of Science, Technology, and Mathematics (STM), Alderson Broddus University, West Virginia, USA. Dr. Shalan received his PhD in Computer Science from Queen's University, Kingston, Ontario, Canada, and his MSc degree in Artificial Intelligence and Machine Learning from Lakehead University, Thunder bay, Ontario, Canada. Dr. Shalan's research sprawls across a number of areas including software system reliability and security, methods and tools for reliable and secure software, architectural representations and control flow monitoring, error detection, and failure prediction.



Dr. Sarika Jain has served in the field of education for over 16 years. Her Research interests are: Knowledge Representation, Semantic Web, Ontological Decision Support, Intelligent Systems. She is an IEEE member, ACM member and a Life Member of Computer Society of India. She has to-date published 40 research papers / book chapters / books with international and national publishers. She is currently working upon developing an Intelligent Decision Support System for recommending actions during unconventional emergencies.

Course  
Co-ordinator

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## Registration Process

Registration for GIAN courses is not automatic because of the constraints on maximum number of participants allowed to register for a course. In order to register for one or multiple non-overlapping courses, you have to apply online using the following steps:

### Stage1:

Web (Portal) Registration: Visit GIAN Website at the link:

<http://www.gian.iitkgp.ac.in/GREGN/index> and create login user ID and Password. Fill up blank registration form and do web registration by paying Rs. 500/- on line through Net Banking/ Debit/ Credit Card. This provides the user with life time registration to enroll in any no. of GIAN courses offered.

### Stage2:

Course Registration (Through GIAN Portal): Log in to the GIAN portal with the user ID and Password created. Click on "Course Registration" option given at the top of the registration form. Select the Course titled "Secure Information Technology" from the list and click on "Save" option. Confirm your registration by Clicking on "Confirm Course".

Only Selected Candidates will be intimated through E-mail by Course Coordinator. They have to remit the necessary course fee in the form of DD drawn in favor of "The Director, NIT Kurukshetra-136 119" payable at NIT- Kurukshetra.

The last date of registration is 1<sup>st</sup> December 2017.