RIPHAH
INTERNATIONAL UNIVERSITY

Prospectus

RIPHAH INSTITUTE OF SYSTEMS ENGINEERING


ABOUT US
ACADEMIC PROGRAMS
SERVICES
TRAINING

Our Mission

"To create a center of excellence for Information Security. Facilitate the market with the best talent in information security and positively contribute to the academic, public and private sectors. Ingrain the spirit of national competitiveness and be a catalyst for change in the field of Information Security."

Riphah Institute of Systems Engineering (RISE)

RISE is a special initiative by Riphah International University to impart quality in education, professional trainings & consultancy in the field of Information Security. With a unique construct this institute out shines all the other educational institutes as it is the first institute that has academia, R&D, training & consulting specializing in information security technology solutions and dedicated to providing information security professionals & delivering cost affective services that span Information Security Management for all industries.

Dr. Saad Naeem Zafar

(CISA, CISM, CRISC, CGEIT)
Director, Riphah Institute of Systems Engineering

Dr. Saad Zafar is currently working as Director, Riphah Institute of Systems Engineering and Dean, Faculty of Computing at Riphah International University (RIU), Islamabad, Pakistan. He has been affiliated with the field of Information Technology for more than twenty years. His area of specialization is Information Security.

At Riphah, he is leading a Secure and Dependable Systems research group. He has been teaching Information Security Management, Security Engineering and Application Security, both at the undergraduate and postgraduate level. He has been Director of Information Technology at Riphah International University and has provided Information Technology consultancy to a number of organizations. Dr. Zafar started his career working as a Software Engineer at Phoenix Technologies and Polysar Incorporated in the USA. Since then he has been involved in many projects related to software acquisition, development and implementation as software engineer, project manager and chief information officer.

He has received his PhD from Griffith University, Australia. His research is in the area of Information Security. He was affiliated with the Dependable Complex Computer-based System (DCCS) research group which was funded by the Australian Research Council. He was also associated with the Software Quality Institute and the Institute of Integrated and Intelligent Systems at Griffith University. He has received Masters in Software Engineering from Griffith University, Australia. He was awarded Academic Excellence Award for his educational performance at the Griffith University.

Khurram Javed

(CEI, CEH, ECSA, CHFI, LPT, CCAI)
Assistant Director, Riphah Institute of Systems Engineering
Cyber Security Consultant/Penetration Tester
Master Trainer, Cyber Security Training

Khurram Javed is currently serving as Assistant Director, RISE. He is a renowned Cyber Security professional leading the strategic development, planning, analysis and execution of diversified projects for clientele varying from defence, strategic, financial, multi-national and telecommunication/internet security related organizations across the globe. Khurram is also an acclaimed academician and has been attached with academia for over a decade and has served as permanent faculty in many prestigious universities in Pakistan. His areas of specialization are Social Engineering, Wireless and Offensive Security.

In addition to managerial responsibilities, he has been delivering as Cyber Security Consultant/Penetration Tester & Master Trainer, under the Professional Development Center at RISE. He is a prolific cyber security mentor and has trained over 500 professionals from leading companies through numerous security training sessions conducted across Pakistan. He is a Certified EC-Council Instructor (CEI), Certified Ethical Hacker (CEH), Computer Hacking Forensics Investigator (CHFI), EC-Council Certified Security Analyst (ECSA) and a Licensed Penetration Tester (LPT) from EC-Council Academy, Kuala Lumpur, Malaysia and is enlisted amongst their Roll of Honor. His competence as a Security Analyst is well acknowledged by the industry through deliverance in training and consultancy projects. He leads the Penetration Testing and Digital Forensics teams at RISE. His other trainings include Cisco Certified Academy Instructor (CCAI), Virtualization Security, Network Analysis & Forensics, Panda Gate Defender Integra-Performa, VoIP design, installation & configuration, CCNA Discovery, FTTH technology and creating an effective CSOC.

Khurram is also an active researcher focusing in the areas of Wireless Security, Social Engineering, Malware Development & Analysis, BOTNETs, Offensive Security and Digital Forensics. He has also contributed towards architecting multiple flavors of Cyber Security Awareness training programs. Khurram is an enthusiastic speaker at Cyber Security conferences, symposiums and seminars and has professional memberships with EC-Council, IEEE, Cisco Network Academy, ISOC, CSTA-ACM and PISA.

Creating Knowledge Beyond Chronology

RISE Research

The objective of research initiatives is to educate future leaders which will enable them to unveil knowledge and generate fresh ideas. Our research groups work in liaison with varied international research consortiums. The key areas of research are:

Secure and Dependable Systems Research Group:

This research group is led by Dr. Saad Naeem Zafar. Active research areas of this group are: Secure Software Engineering, Information Security Management, Information Security Policies, IT Governance.

Offensive Security Research Group:

This research group is led by Mr. Khurram Javed. Active Research areas of the group are: Wireless Security, Ethical Hacking, Social Engineering, Penetration Testing, Offensive Security, Digital Forensics, Malware Research, BOTNETS & Android exploitation framework.

Network Security Research Group:

The members of the Network Security Research Group (NSRG) are committed to design, analyze and implement the security services and mechanisms in order to achieve the following two primary objectives: i) to contribute towards enhancing the security of network infrastructure, security protocols, and network applications, ii) to contribute towards discouraging cyber-attacks through network forensics readiness and sophisticated attack detection schemes. Dr. Muhammad Yousaf leads the NSRG group. Following are the active research projects currently going on in the NSRG group: Network Traffic Analysis, Next Generation Firewalls, Intrusion Detection and Prevention Systems, Public Key Infrastructure based Smart Card Authentication Systems, Secure VoIP Infrastructures, Secure IoT Infrastructures, Secure Group Communication Systems, User Profiling Techniques, Privacy Preserving Techniques. www.facebook.com/groups/nsrgp

International Research Grants

Strategic Support for Accreditation of Programs and Internationalization at South Asian Higher Education Institutes (HEIs)

Start: 15-01-2021 - End: 14-01-2024

Project Reference: 619438-EPP-1-2020-1-PK-EPPKA2-CBHE-JP

EU Grant: 876206 EUR

Programme: Erasmus+

Key Action: Cooperation for innovation and the exchange of good practices

Action Type: Capacity Building in higher education

Because of globalization, standardization leading to accreditation of academic programs has become an increasingly dominant theme in higher education. In order to achieve it, there are various challenges faced by Asian partner country Higher Education Institutions, which resulted in creating the motivation towards undertaking this project. The partner countries face the challenge of strong competition with international institutions because of the easy and wide access to higher education abroad. The institutions cannot delay any further to address it, otherwise they risk the severe issues of comparability of quality of education locally and abroad, and other issues relating to recognition of qualification. Moreover, the increased proportion of students entering university-level education has increased the complexity of higher education systems across the entire partner countries, thereby also giving rise to the need of standardization and accreditation. In spite of huge student population in Asia, unfortunately very few universities from Asia are seen in good positions in global world ranking of universities.

Map of project partner countries

Deployment of Collaborative Modern HoneyNet to improve Regional Cyber security Landscape (CMoHN)

Landscape (CMoHN)The project deployed and established the core skills required to manage and integrate different honeynets and designed new honeypots for countering cyber-attacks. The project connected with other honeynets in the region to form a regional collaborative honeynet network, and promoted R&D activities to secure network infrastructure through publications and conducting community awareness seminars. Grant amount for this research project is AUD 30,000. Dr. Muhammad Yousaf was the principal investigator of the project.

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GRANTS
2016

CATEGORIES

- APNIC Internet Operations Research Grants
- Internet Society Cybersecurity Grant
- Community Impact Grants
- Technical Innovation Grants

APPLICATIONS REVIEWED

300+

10 INITIATIVES SELECTED

Australia, India, Myanmar, New Zealand, Pakistan, Philippines, Singapore, Thailand and Tonga

National Research Grants

- **Development of interactive online "cyber-security and privacy awareness training program for students"**

  "The proposed project helps to curtail the threats/vulnerabilities associated with cyberspace by developing and evaluating cyber-security awareness course for vulnerable segments of society (School and College/ University going Students)".

  Grant amount for this research project is PKR 4.6 M. Dr. Saad Naeem Zafar is the principal investigator of the project.

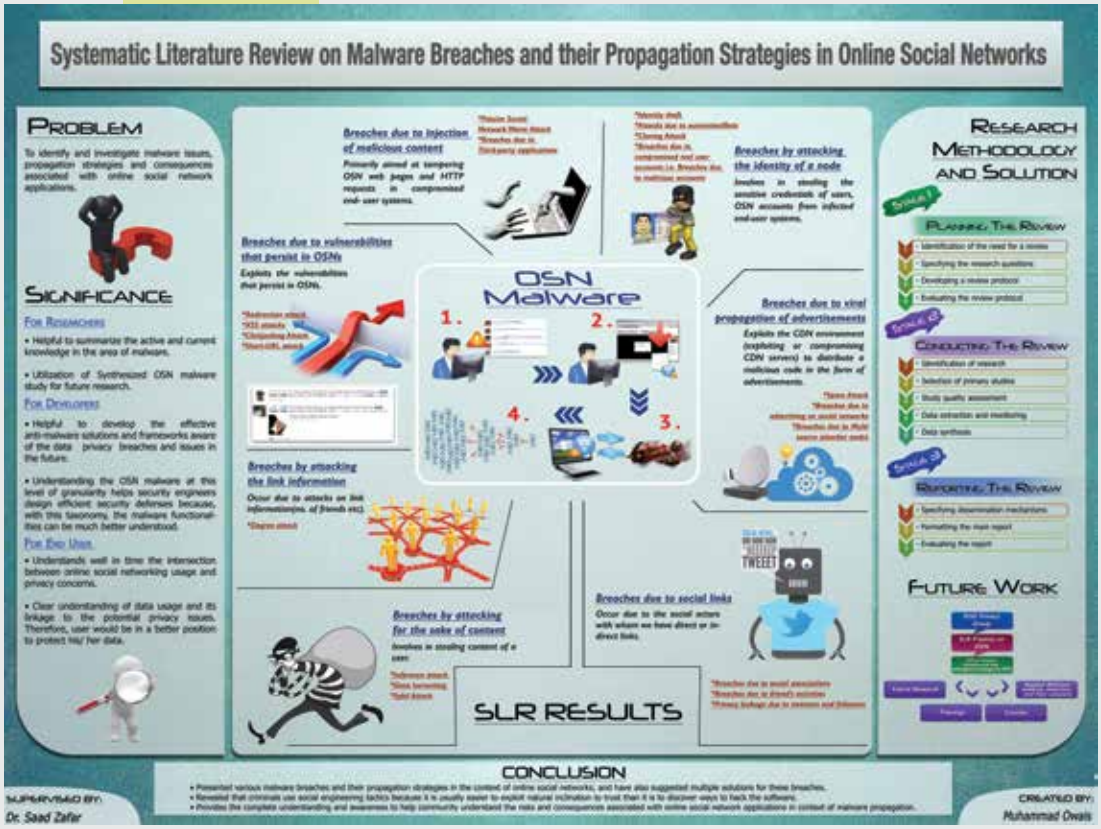
- **Establishment of Cyber Range using Open Source Technologies**

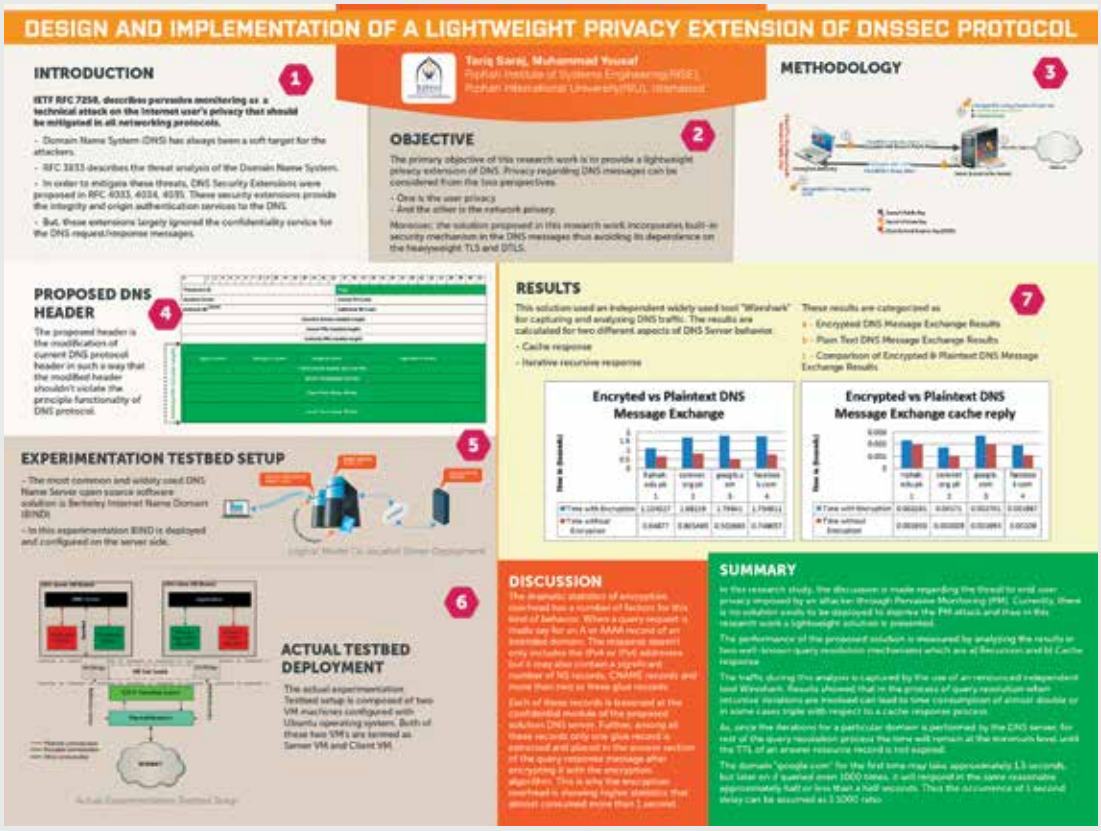
  Project funded by National Engineering and Scientific Commission (NESCOM), Directorate of Research and Academic Coordination (RAC). Awarded to Principal Investigator Dr. Muhammad Yousaf, Riphah Institute of Systems Engineering, Riphah International University Islamabad. 2017 – 2019.

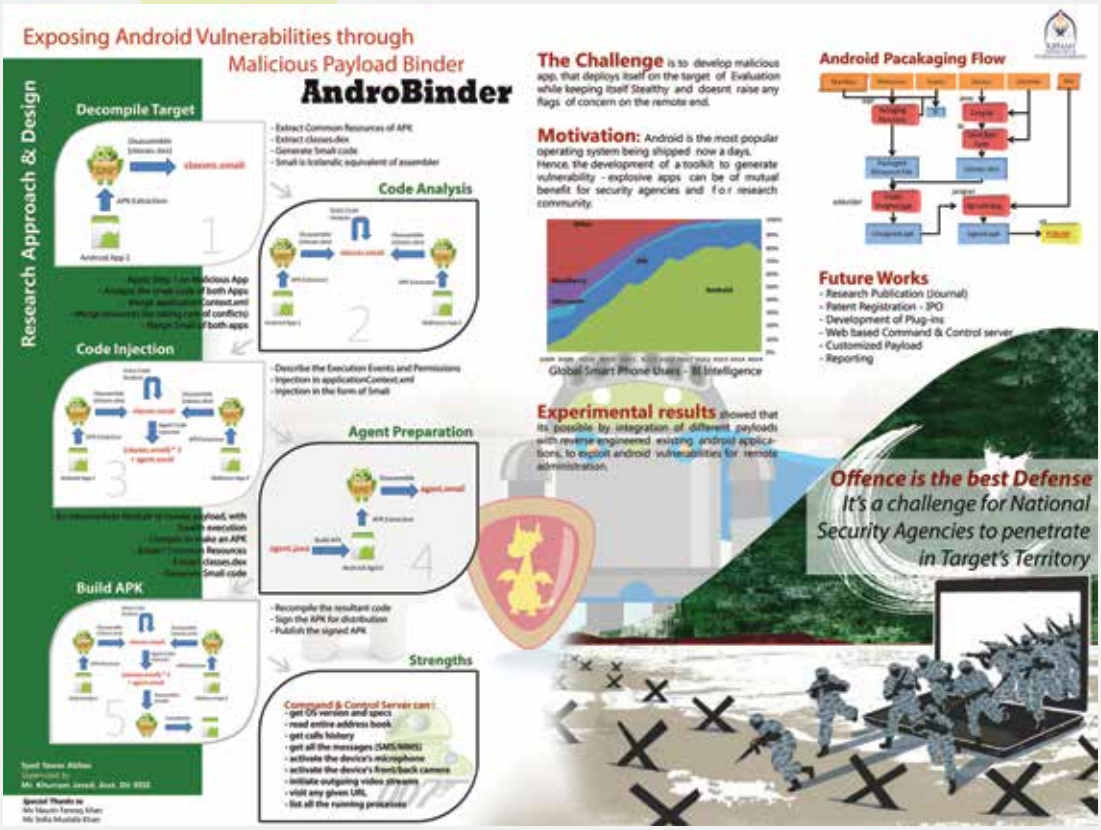
- **Secure Sandbox Orchestration**

  Project funded by National Engineering and Scientific Commission (NESCOM), Directorate of Research and Academic Coordination (RAC). Awarded to Principal Investigator Dr. Muhammad Yousaf, Riphah Institute of Systems Engineering, Riphah International University Islamabad. 2019 – Continue.

Research Projects






Exposing Android Vulnerabilities through
Malicious Payload Binder
AndroBinder
Research Approach & Design
Decompile Target
Code Analysis
Code Injection
Agent Preparation
Build APK
Strengths
The Challenge is to develop malicious app, that deploys itself on the target of Evaluation while keeping itself Stealthy and doesnt raise any flags of concern on the remote end.
Motivation: Android is the most popular operating system being shipped now a days. Hence, the development of a toolkit to generate vulnerability - explosive apps can be of mutual benefit for security agencies and for research community.
Global Smart Phone Users - BI Intelligence
Experimental results showed that its possible by integration of different payloads with reverse engineered existing android applications, to exploit android vulnerabilities for remote administration.
Android Pacakaging Flow
Future Works
- Research Publication (Journal)
- Patent Registration - IPO
- Development of Plug-ins
- Web based Command & Control server
- Customized Payload
- Reporting
Offence is the best Defense
It's a challenge for National Security Agencies to penetrate in Target's Territory

Programs Offered

MS Information Security (MSIS)

The program aims to develop core competencies in various areas of information security like information security management, application security, computer networks security, and digital forensics. Students will have the opportunity of learning the technical aspects of information security by understanding current threats and vulnerabilities and examining ways of developing effective countermeasures. In order to cater for wide range of professional and academic interests, students have the option of selecting their course work according to their specific needs. Currently, RISE is offering three degree programs that are: i) MS (Information Security), ii) MS (Data Science), and iii) Ph.D. Computing with area of specialization as Information Security and Data Science.

Duration 4 Semesters (2 Years)

Eligibility

- 16-years of education in science/engineering discipline preferably with 4 years degree program of BS (SE/CS/IT/EE) or equivalent from HEC recognized university or degree awarding institute with at least 60% marks or CGPA of at least 2.0 (on a scale of 4.0). (NOTE: candidates may have to complete the deficiency coursework as determined by the admissions committee).
- Two years of relevant work experience is recommended.

Admission Criteria

- Qualify GRE General type admission test conducted by the university or a valid NTS GRE General test
- Qualify the admission interview.
- Admission will depend to the candidate's overall score in previous academic degree, admission test and performance in the interview.

Intake: Spring (January) & Fall (July)

Class Timings:

05:30 pm – 08:30 pm (Monday – Friday)

Scholarships: Talent & need based scholarship (upto 100% on tution fee)

List of Core Courses

Code	Course Name	Cr. Hrs
IS-5063	Cryptography	3
IS-5073	Information Privacy and Security	3

University Mandatory Courses

Code	Course Name	Cr. Hrs
CM-5001	Ethics in Practice-1	1
CM-5011	Ethics in Practice-2	1

Some Elective Courses

Code	Course Name	Cr. Hrs
IS-6013	Information Systems Auditing	3
IS-6023	Risk Management	3
IS-6033	Information Security Management	3
IS-6043	IT Governance	3
IS-6063	Strategic Management, Leadership & Governance	3
IS-5023	Network Security	3
IS-6233	Wireless Networks Security	3
IS-6203	Ethical Hacking	3
IS-6213	Penetration Testing	3
IS-6253	Distributed and Cloud Computing	3
IS-6283	Security of Internet of Things	3
IS-5053	Application Security	3
IS-6403	Secure Software Development	3
IS-6433	Malware Analysis	3
IS-6443	Programming for Security Professionals	3
IS-6453	Machine Learning for Security Applications	3
IS-6463	Database Security	3
IS-6473	Security Testing	3
IS-6483	Trusted Computing	3
IS-6633	Applied Cryptography	3
IS-6663	Digital Forensics	3
IS-6703	Data Analysis and Quantitative Techniques	3
IS-6723	Ethics in Information Security	3
IS-6803	Advanced Topics in Applied Cryptography	3
IS-6813	Quantum Computing & Information Security	3
IS-6823	Quantum Cryptography	3
IS-5433	Research Methods	3

Degree Completion

For award of MS degree, a student must have:

a. Passed courses totaling at least 32 credit hours, including two core courses.
b. Obtained a CGPA of 2.5 or more.

MS Data Science (MSDS)

Data science is an interdisciplinary field of scientific methods, processes and systems for understanding the modern-age data sources, modelling the data behavior, extracting the business insight from that data, predicting the future behavior and delivering the useful data-driven business applications.

In 2013, IBM estimated that two and a half million terabytes of data are created every day. Some of the sources, generating the data are:

a) Individuals (through social networks and smartphones for the reflection of society)
b) Machines (through real-time, network connected sensors – "the internet of things")
c) Business and commerce (e.g. transaction records and financial data)
d) Education (e.g. academics, literature, research)
e) Medical / Healthcare (personal health records, health insurance)
f) Justice (crime statistics for a city for the sake of efficient resource deployment)
g) Transportation (Vehicle, pedestrians, trains, airlines, movement data)

The challenge is to make sense of this ever-increasing source of data for the use and benefit of society. A lot many companies and higher education institutions are already planning and implementing for this data tsunami. Data science has emerged as an interdisciplinary paradigm that draws upon the traditionally distinct areas of computer science, applied mathematics and statistics, applications from natural and social science, engineering, and business for developing solutions for gathering, cleaning, archiving, analyzing and visualizing data for the purposes of making informed decisions.
The Master of Science in Data Science (MS-DS) program aims to develop core competencies in various areas of data science like understanding data products, data extraction, data cleaning, data modeling, classification, clustering, predictions, etc. Students will have the opportunity of learning the technical aspects of data science by understanding the trends in the current data products and preparing for the required data analysis skillset for the upcoming information processing systems. To cater for wide range of professional and academic interests, students have the option of selecting their course work according to their specific needs. Riphah Institute of Systems Engineering (RISE) is currently offering MS (Information Security) program and the proposed MS (Data Science) program is expected to not only complement the existing program but also it will open new opportunities for coping with the challenges of the near future.

Duration: 4 Semesters (2 Years)

Eligibility

- 16-years of education in computing/science/ engineering discipline preferably with 4 years degree program of BS (Computer Science, Software Engineering, Information Technology, Applied Mathematics, Mathematics, Statistics, Computer Engineering, and Electrical Engineering) or equivalent from HEC recognized university or degree awarding institute.
- At least CGPA of 2.0 on the scale of 4.0 or 60% marks in the previous degree.
- Two years of relevant work experience is recommended.
- Candidates may have to complete the deficiency coursework as determined by the admissions committee. List of deficiency courses is:
  1. Programming Fundamentals
  2. Data Structures and Algorithms / Design and Analysis of Algorithms
  3. Database Systems

Admission Criteria

- Qualify GRE General type admission test conducted by the university or a valid NTS GRE General test.
- Qualify the admission interview.
- Admission will depend on the candidate's overall score in previous academic degree, admission test and performance in the interview.

Intake: Spring (January) & Fall (July)

Class Timings

05:30pm – 08:30pm (Monday – Friday)

Scholarships

Talent & need based scholarship (upto 100% on tution fee)

List of Core Courses

Code	Course Name	Cr. Hrs
DS-5013	Statistical and Mathematical Methods for Data Science	3
DS-5023	Tools and Techniques in Data Science	3
DS-5033	Machine Learning	3

University Mandatory Courses

Code	Course Name	Cr. Hrs
CM-5001	Ethics in Practice-1	1
CM-5011	Ethics in Practice-2	1

List of Specialization Courses

Choose any two from the following specialization courses of data science.

Code	Course Name	Cr. Hrs
DS-5513	Big Data Analytics	3
DS-5523	Deep Learning	3
DS-5533	Natural Language Processing	3
DS-5543	Distributed Data Processing	3

Some Elective Courses

Code	Course Name	Cr. Hrs
DS-6113	Data Classification	3
DS-6123	Data Clustering	3
DS-6133	Predictive Analytics	3
DS-6143	Data Visualization	3
DS-6153	Advanced Database Systems	3
DS-6163	Advanced Data Structures	3
DS-6173	High Performance Computing	3
DS-6213	Data ware Housing	3
DS-6223	Cloud Computing	3
DS-6233	Datacenter Design	3
DS-6313	Data Mining	3
DS-6323	Distributed Machine Learning	3
DS-6333	Time Series Analysis and Prediction	3
DS-6343	Social Network Analysis	3
DS-6353	Applied Text Analysis	3
DS-6363	Modelling and Reasoning in Bayesian Networks	3
IS-5043	Information Systems Security	3
IS-6013	Information Systems Auditing	3
DS-6433	Data Analytics for Security Applications	3
DS-6513	Health Data Analytics	3
DS-6613	Data Privacy Laws and Regulations	3
DS-6623	Ethics for Data Scientists	3
DS-6633	Optimization Methods in Data Science	3
IS-5433	Research Methods	3

Degree Completion

For award of MS degree, a student must have:

a. Passed courses totaling at least 32 credit hours, including three core courses and two specialization courses.

b. Obtained a CGPA of 2.5 or more.

Graduate Diploma

The Graduate Diploma program has been designed to offer a higher degree of flexibility, especially for the professionals, in order to meet their targeted learning requirements in constrained time limits. Additionally, the students successfully completing the Graduate Diploma will have the opportunity to upgrade their earned diploma into MS program. The knowledge areas include Information Security, Data Science, Software Engineering, and Computer Science.

Eligibility Criteria

16-years of education in Computer Science or Software Engineering or any other 16-years degree in computing discipline preferably with 4 years degree program of BS (Computer Science or Software Engineering) or equivalent from HEC recognized university or degree awarding institute.

1. At least CGPA of 2.0 on the scale of 4.0 or 60 % marks in the previous degree.
2. An industrial experience of two years is recommended.

Requirements for the Award of Graduate Diploma

After successful completion of 5 courses each of 3 credit hours, the student can claim his/her diploma. Duration of diploma is 1 year or maximum 2 years.

Conversion Options

The students completing the graduate certificate and graduate diploma will have the following conversion options.

1. A student who enrolled and successfully completed graduate diploma will have the right to enroll in the MS program later on such that the earned credit hours in diploma will be counted towards relevant MS program under the rules, outlined by university.
2. A student who enrolled in MS program and partially completed the coursework requirements and is not willing to continue, will have option to get certificate(s) or graduate diploma depending upon the successfully completed credit hours. One successfully completed course will equate one graduate certificate while five successfully completed courses will be equivalent to graduate diploma.
3. A student who enrolled in graduate diploma and is not willing to continue, will have the right to get graduate certificates equal to the successfully completed courses.

Intake and Class Timings

It will be one semester long i.e. Spring (February-June) or Fall (August - January) Evening Classes, Monday to Friday, 05:30 PM to 08:30 PM.

Titles to Offer

Broadly, any candidate who fulfils the admission criteria can enroll for graduate diploma and can study any course, offered at the graduate level in the department of software engineering & computer science or the department of cyber security and data science. Specifically, the department(s) can offer specialized graduate certificate(s) / graduate diploma(s) according to the requirements of a group of professionals. For more information about the specific titles to be offered please refer to list of courses provided in MS programs.

Graduate Certificate

The Graduate Certificate program has been designed to offer a higher degree of flexibility, especially for the professionals, in order to meet their targeted learning requirements in constrained time limits. Additionally, the students successfully completing the Graduate Certificate will have the opportunity to upgrade their earned certificate into diploma and MS program. The knowledge areas include Information Security, Data Science, Software Engineering, and Computer Science.

Eligibility Criteria

16-years of education in Computer Science or Software Engineering or any other 16-years degree in computing discipline preferably with 4 years degree program of BS (Computer Science or Software Engineering) or equivalent from HEC recognized university or degree awarding institute.

1. At least CGPA of 2.0 on the scale of 4.0 or 60 % marks in the previous degree.
2. An industrial experience of two years is recommended.

Requirements for the Award of Certificate

After successful completion of 3 credit hours course work the student can claim his/her certificate. Duration of certificate is 18 weeks.

Conversion Options

The students completing the graduate certificate and graduate diploma will have the following conversion options.

1. A student who enrolled and successfully completed graduate certificate will have the right to enroll in diploma and in the MS program later on such that the earned credit hours in certificate will be counted towards relevant diploma/MS program under the rules, outlined by university.
2. A student who enrolled in MS program and partially completed the coursework requirements and is not willing to continue, will have option to get certificate(s) or graduate diploma depending upon the successfully completed credit hours. One successfully completed course will equate one graduate certificate while five successfully completed courses will be equivalent to graduate diploma.
3. A student who enrolled in graduate diploma and is not willing to continue, will have the right to get graduate certificates equal to the successfully completed courses.

Intake and Class Timing

It will be one semester long i.e. Spring (February-June) or Fall (August - January) Evening Classes, Monday to Friday, 05:30 PM to 08:30 PM.

Titles to Offer

Broadly, any candidate who fulfils the admission criteria can enroll for graduate certificate and can study any course, offered at the graduate level in the department of software engineering & computer science or the department of cyber security and data science. Specifically, the department(s) can offer specialized graduate certificate(s) / graduate diploma(s) according to the requirements of a group of professionals. For more information about the specific titles to be offered please refer to list of courses provided in MS programs.

PhD Computing

Students enrolled in the PhD Computing program are required to complete minimum 48 credit hours of course/research work. Students are required to take minimum 18 credit hours (typically 6 courses) as part of their course work. Objective of these 6 courses is to cover the breadth as well as depth of the knowledge of their interest area. At the completion of these 6 courses, students are expected to cover the issues, best practices, standards, research gaps and challenges of their interest area. On the completion of the course work, students are required to pass the comprehensive / doctoral qualifying exam as well.

Furthermore, students are required to take minimum of 30 credit hours as part of their research work. During this phase, students initially are required to defend their PhD synopsis / proposal defense. Students are required to publish their research work in ISI indexed impact factor journals. Minimum of 1 ISI indexed impact factor journal paper and 2 conference papers in high quality international research conferences are required as part of the PhD degree program. However, this number can be increased by the concerned research supervisor. Later on, student is required to defend his/her PhD pre-final defense. Student's research thesis is also evaluated by 2 foreign experts from technologically developed countries. Finally, student is required to defend his/her PhD final public defense.

Generally, students complete their PhD degree requirements in 4 years. However, in some rare cases this duration can last up to maximum 8 years. Students failing to complete their PhD degree requirements in 8 years will be disqualified.

Eligibility Criteria

- 18 years of education in science / engineering discipline preferably with MS/MPhil (IS/SE/CS/IT/EE) or equivalent from HEC recognized university or degree awarding institute.

  (NOTE: candidates may have to complete the deficiency coursework as determined by the admissions committee.)
- CGPA of 3.0/4.0 or above in MS/MPhill degree.
- Two years of relevant work experience is recommended.

Admission Criteria:

- A valid GAT (Subject) type score of minimum 70% is required
- Interview

Intake: Spring & Fall (Twice a year)

Timings: Evening Classes

Duration: 3 to 8 years

Active Research Areas:

- Cyber Security Policies
- Malware Analysis
- Penetration Testing
- Network Forensics
- Network Security

Program Compliance and Accreditation

PhD program is structured to meet the requirements of Higher Education Commission (HEC), Pakistan. The programs are offered by Riphah International University, which is a Federally Chartered University based in Islamabad, Pakistan. Programs are approved by the relevant university authorities.

Trainings

World's most advanced trainings delivered by Professional Certified Instructors.

C|EH Certified Ethical Hacker

CEH provides a comprehensive ethical hacking and network security hands-on training program to meet the standards of highly skilled security professionals. Hundreds of SMEs and authors have contributed towards the content presented in the CEH courseware. Our researchers have invested thousands of man hours researching the latest trends and uncovering the covert techniques used by the underground community.

C|HFI Computer Hacking Forensic INVESTIGATOR

Computer forensics include the application of computer investigation and analysis techniques in the interests of determining potential legal evidence.CHFI enables trainees to acquire necessary hands-on experience on various forensic investigation techniques and standard forensic tools necessary to successfully carry out a computer forensic investigation leading to prosecution of perpetrators.

E|CSA EC-Council Certified Security Analyst

Computer forensics include the application of computer investigation and analysis techniques in the interests of determining potential legal evidence. CHFI enables trainees to acquire necessary hands-on experience on various forensic investigation techniques and standard forensic tools necessary to successfully carry out a computer forensic investigation leading to prosecution of perpetrators.

C|SCU Certified Secure Computer User

In addition to protect the information assets, computer and network security threats such as identity theft, credit card & online banking frauds, virus and backdoors, emails hoaxes, loss of information, hacking attacks and social engineering are covered in this program.

CISM Certified Information Security Manager
An ISACA Certification

CISMs understand the business. Its assists to know how to manage and adapt technology to the enterprise and industry. The uniquely management - focused CISM certification promotes international security practices and recognizes the individual who manages designs, and oversees and assesses an enterprise's Information Security.

CISA Certified Information Systems Auditor
An ISACA Certification

This course is designed to prepare the participants for the CISA examination. It covers the unique aspects of managing an audit and the knowledge necessary to complete the task. The course focuses on the design and implementation of general computer control, application level control auditing as well as introducing the risk based management approach. While disseminating information about Information Systems auditing standards, this course enables the trainee to perform Information System audits.

CARE

(Cyber Security Awareness & Risk Mitigation Essential)

CARE training is designed to provide children, teens and women the cyber security education and awareness and offers to combat cybercrime by raising knowledge about cyberspace. It consists of several modules and the training is provided online in an e-learning environment. The modules cover the basics of cyber threats and different attack variants. It coaches children and young women about what actions to take if they become victims of any of cybercrimes. The course educate the participants through statistics, info graphics and real life case studies. It also map the cyber-crimes against the PECA law in order to enlighten students about the legal actions that can be taken. Furthermore it also provide guidelines to follow in order to protect oneself online. The potential benefits of the courseware include mitigation of unsafe disclosure of personal information, hence help them to avoid being victims of cyber-crimes.

CISSP

The Certified Information Systems Security Professional (CISSP) is the most globally recognized certification in the information security market. CISSP validates an information security professional's deep technical and managerial knowledge and experience to effectively design, engineer, and manage the overall security posture of an organization.

The broad spectrum of topics included in the CISSP Common Body of Knowledge (CBK®) ensure its relevance across all disciplines in the field of information security. Successful candidates are competent in the following eight domains:

- Security and Risk Management
- Asset Security
- Security Architecture and Engineering
- Communication and Network Security
- Identity and Access Management (IAM)
- Security Assessment and Testing
- Security Operations
- Software Development Security

TEAM MEMBERS

Names	Designation
Dr. Saad Naeem Zafar Ph.D – Software Engineering (Australia), MS – Software Engineering (Australia), CISA, CISM, CRISC, Member IEEE, ISACA saad.zafar@riphah.edu.pk	Professor, Director RISE
Dr. Naveed Ikram PhD - Computer Science (University of Salford, UK) M.Sc - Computer Science (University of Salford, UK) Chartered IT Professional, Senior Member ACM, Member IEEE, AIS, CSP Leader: Empirical Software Engineering Research Group naveed.ikram@riphah.edu.pk	Professor, Associate Dean, Graduate Program
Dr. Muhammad Zubair Ph.D. Electrical Engineering (IIUI), MS Information Technology (Hamdard University) muhammad.zubair@riphah.edu.pk	Professor, Head of Department Software Engineering and Computer Science
Dr. Muhammad Yousaf PhD Computer Engineering (CASE) MS Computer Engineering (CASE) CISSP Member $(ISC)^2$ Founding Member ISOC Islamabad Chapter Leader: Network Security Research Group (NSRG) muhammad.yousaf@riphah.edu.pk	Associate Professor Head of Department, Cyber security and Data science
Dr. Sajjad Ahmed Siddiqi Ph.D - Computer Science, (Australian National University) M.Sc - Computer Science, (Quaid-i-Azam University, Islamabad) sajjad.ahmed@riphah.edu.pk	Assistant Dean RARE Assistant Professor
Mr. Khurram Javed PhD Scholar - Wireless Security (UTM, Malaysia) MS - Computer Networks (IIUI, Islamabad) Certified EC-Council Instructor (CEI) Certified Ethical Hacker (CEH) Certified Hacking Forensics Investigator (CHFI) EC-Council Certified Security Analyst (ECSA) Licensed Penetration Tester (LPT) Virtualization Security Network Analysis & Forensics ,CCAI & CCNA 4.0 discovery Leader: Offensive Security Research Group khurram.javed@riphah.edu.pk	Assistant Director RISE Assistant Professor, Head Commercialization and Trainings, Cyber Security Consultant/ Analyst, Master Trainer Cyber Security
Mr. Obaid ur Rehman Certified Ethical Hacker (CEH) Trained for: ISMS 27001 Lead Auditor Computer Hacking Forensic Investigator (CHFI) CSOC - SIEM Installation, Configuration and Administration CCNA, VMWare 3.5 ESX, ITIL v3 Foundation PANDA Gate Defender Performa V3.02 & Panda Security for Business PANDA Gate Defender Integration obaid.rehman@riphah.edu.pk	Manager Commercialization and Trainings
Dr. Musharif Ahmed Ph.D. - Computing (Riphah International University) MS - Systems and Software Engineering (MAJU), musharif.ahmed@riphah.edu.pk	Assistant Professor In-Charge Students Affairs HoD, Software Engineering & Computer Science

Names	Designation
Dr. Adeel Zafar Ph.D. - Computing Science (NU-Fast, Islamabad) MS - Computing Science (NU-Fast, Islamabad) BS - Software Engineering (Riphah International University)	Assistant Professor In-Charge DS Program
Dr. Syed Muhammad Sajjad PhD Computing (Riphah International University) MS Electrical Engineering (Networks Engineering) BSc Electrical Engineering (Electronics) (FUUAST, Islamabad) Muhammad.sajjad@riphah.edu.pk	Senior Lecturer Incharge Research
Ms. Komal Batool MS-Information Security (Military College of Signals) Komal.batool@riphah.edu.pk	Senior Lecturer
Mr. Tariq Khan MS - Telecom and Networking (IQRA University, Islamabad) Bachelors in Computer Science - HONS (AIR University) tariq.khan@riphah.edu.pk	Senior Lecturer
Mr. Ahmed Iftikhar MS - Information Security (Riphah International University) BS - Computer Engineering COMSATS, Wah Cantt (CCNA, CCNP, MCSE, MCSA, MTA, CEH, CHFI) Ahmed.iftikhar@riphah.edu.pk	Support Instructor
Mr. Arslan Ali Khan MS - Information Security (In progress), (Riphah, Islamabad) BS - Telecom Engineering (National University of Computer & Emerging Sciences) Ahmed.iftikhar@riphah.edu.pk	Teaching Fellow
Mr. Osamah Ahmed MS - Information Security (In progress), (Riphah, Islamabad) Bachelor of Science in Bioinformatics (COMSATS, Islamabad) osamah.ahmed@riphah.edu.pk	Teaching Fellow
Mr. Zain Akhtar BS - Software Engineering (Riphah International University) (CEH, ECSA, CCNA) zain.akhtar@riphah.edu.pk	Assistant Manager Commercialization & Trainings
Mr. Ahmed Aizaz Abid MS - Project Management (Riphah International University) BS - Software Engineering (Riphah International University) Aizaz.ahmed@riphah.edu.pk	Program Coordinator Cyber Security & Data Sciences
Mr. Ahsan Ilyas MBA - HRM (Arid Agriculture University, Rawalpindi (PMP) Ahsan.ilyas@riphah.edu.pk	Assistant Manager Administration
Mr. Irfan Ahmad MBA - Finance (Islamic International University) irfan.ahmad@riphah.edu.pk	Finance Officer
Mr. Aslam Malik B.Com (Allama Iqbal Open University, Islamabad) aslam.malik@riphah.edu.pk	Assistant Program Coordinator

Corporate Training Sessions













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Testimonials

I and my colleagues participated in the training of CEHv8 and we found Mr. Khurram Javed as instructor of CEHv8 is not only instructor but true mentor for security professional. Moreover, he turned computer scientist into cyber security professional. RISE as institute provide us state of the art resources for CEHv8 training. I recommend computer & IT professionals to attend CEHv8 at RISE and see yourself a new world of wonder.

M. Shakil (NESCOM).

In modern era of information, its security at all the levels individual, organizational, national; now it has become a very need of the time. Training was up to the mark and RISE really is contributing at all the mentioned levels to induce security expertise to coup with up-coming threats.

M. Sohail Iqbal (NESCOM).

Training comprises of many good workshops, topics, labs, tutorials and all above conducted by very learned Mr. Khurram Javed. Instructor is a very professional and instrumental in his field and tried his level best to impart training to the participant. His support Mr. Ahmed is also well trained, experienced and having required knowledge to conduct such trainings and maintain lab environment.

Muzammel Hussain (Pak Navy).

The CEH training helped me boost my confidence towards my aim of CEH Exam. The trainer was very proficient and kept a healthy environment. CEH training gave a set of direction towards exam preparation and moreover provided a clearer range and concepts, roadmap, and strategy to the skills at hand.

Noushin Ahson (Systems Ltd).

Mr. Khurram teaching skills is excellent. I have been through many trainings but the friendly way with practical and live examples he trained us it's fabulous. I am very happy to being a student of him. The course material is really good and the moreover the way he delivers it made us to take interest. In last I wish him best of luck to Mr. Khurram Javed and RIPHAH International University.

Sohaib Naqi (Kaspersky).

The training met our expectations, especially in form of course contents, material provided and most important trainer knowledge and the way of knowledge sharing. Labs and related material was excellent, discussions were often open and based on knowledge sharing. I hope provided material/ source information (dumps etc) will help us to get certified. From improvement perspective, if facilities provided at training campus are taken care, it will further facilitate participants to focus on learning.

Muhammad Qaiser Iqbal (Ufone).

The CEH training by Khurram was one of the best training I have received in my life. These 5 days contained a wealth of knowledge related to technical hacking, offensive and of course, defensive reason. The training not only broadened my vision on digital security but also opened horizon of various land of security measures that should have been undertaken by me, but were ignored due to lack of knowledge.

It is usually said that 'ignorance of bless' but not in this case. Khurram Javed for alleviating our sense of security and opening our eyes to the dark that security instant until you is not connected to the internet.

Mustafa Shiraz Ahmed (SBP).

This was an excellent experience for me. The training has been provided by skilled trainer i.e. Mr. Khurram Javed. He shared his professional experiences & provided a real time insight into practical scenarios.

I absolutely enjoyed all parts of training setup including the meals & interaction with other participants. I hope to apply all the knowledge gained & improve my skills on top of the kick start and platform that this training has provided.

I will definitely recommend this to my colleagues. Thank you Mr. Khurram, Mr. Ahmad & Riphah for this wonderful experience.

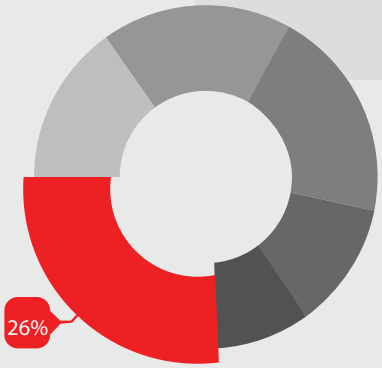
Waqas Arshed (Systems Ltd).

The training was very good. It does not only improved my knowledge but also enhanced my vision by looking at things form different perspective. The lab content was excellent and tools and material which was provided are also sufficient for self-training and exam preparation. The training arrangement, including equipment and environment were excellent as well. Khurram is very knowledgeable and have complete grip and command over the topic. Ahmed was very helpful and humble and was always there to help us.

Syed Jaffer Zaidi.

Clientele

Our clientele is from different sectors of Pakistan including Defense, government, telecom, banks and IT industry. Almost 26 % of participation is from the defense sector. Higher level defense and governmental officials have participated in our training programs.



Banks (15%) Government (18%) IT Industry (20%) Telecom (12%)
Other (9%) Defence (26%)

Defence
MOD
GHQ
ISI
Military Intelligence
PAF
SPD-GHQ
PAEC
Pakistan Navy

Banks
State Bank of Pakistan
Meezan Bank
Bank Al Islami
MCB
National Bank of Pakistan
UBL
Samba Bank
Tameer Bank

Government
NADRA
Islamabad Police
HEC
PSO
SNGPL

Telecom
NTC
WARID
Telenor
Wateen
Wi-Tribe

Universities
LUMS
University of Dammam
MCS (NUST)
Agha Khan University
FAST NU

Technology
ABM Group
MT Soft
Horizon
Strategic Security
Rewterz

So far we have trained numerous personnel form different sectors like Defence, IT Companies, Banking, Education, Energy Sector etc.

Ministry of Defense	GHQ (Armed Forces)	Inter Services Intelligence	Military Intelligence	SPD-GHQ
Air Weapon Complex	NDC/NESCOM	Pakistan Air Force	MCS-NUST	State Bank of Pakistan
NADRA	Pakistan Atomic Energy Commission	National Telecom	Kaspersky Lab (U.A.E)	Ufone Telecom
Ernst and Young	Meezan Bank	PARCO	Bank Al-Islami	Islamabad Police
Warid Telecom	Telenor Telecom	Wateen	Muslim Commercial Bank	Higher Education Commission
NIFT	PERN	Suparco	LUMS	University of Dammam (Saudi Arabia)
Wi-Tribe	CcureIT	A.F.Ferguson	KPMG (U.K)	GulfCap Investment (U.A.E)
Systems Limited	Pakistan Navy	Nakheel (U.A.E)	Pakistan State Oil	National Bank of Pakistan

United Bank Limited	Samba Bank	Tameer Bank	Agha Khan University	SNGPL
Central Depository Company of Pakistan	NRTC	Rewterz	CMA CGM Systems (U.A.E)	NLC
NCCPL	National Foods Limited	Horizon Technologies	TRG	FAST-NU
Toyota-Indus Motors	Strategic Security	FireEye	NetSoft	I2c inc
Junaid Jamshed	ABM Group	Tullo	Axvoice	Bata
PNEC	Muller and Phipps	Aptech	Dawn Media Group	Dubai Immigration
CASE	Kualitatem	Coeus	Infini Logic	Deltasoft
Fariya Network	GIZ International	GulfCap Investments	ISRA University	IP 360
Infogistic	Institute of Chartered Accountants of Pakistan	Institute of Space and Technology	Risk Associated	LMKR

 Pacific Delta Shipping	 NIB Bank	 Sui Northern Gas Pipelines Limited SNGPL	 Sonari Bank	 Sita Aero
 Nest Bridge	 Siemens	 Server4sale	 Lucky Cement	 Tanchulas
 CUST	 voizar	 NCCPL	 PTCL	 KFUEIT
 A.F. Ferguson & Co	 BTMU	 Agar International (Pvt.) Limited	 Fatima Group	 Air-University
 Haniya Technologies	 Askari Bank	 FFC	 SELA-PASS	 CTD

RISE Events and Invited Talks

- Defending Cyber Security Strategy for Pakistan : Task Force on Cyber Security (Senate Defense Committee)
- Cyber Security Landscape: Sialkot Chamber of Commerce and Industry
- The Digital Underworld – Dark, Dangerous and Mysterious: Military College of Signals, National University of Science and Technology
- Information Security and Academia: National Defense University, Islamabad
- Role of Academia in Information Security: Military College of Signals, National University of Science and Technology
- Anatomy of Botnets - 6th Annual Summit & Roundtable Chief Information Security Officer Middle East, Dubai, United Arab Emirates
- Threat to Critical Infrastructure: Cyber Secure Pakistan, Islamabad
- Hackers – Blessing in Disguise: IEEE Pakistan Student Computer Society Congress (PSCSC), Islamabad
- Hacking the Future: 12th International Bhurban Conference on Applied Sciences & Technology (IBCAST)
- The Art of Deception: National Information Security Conference
- Living in the Hacker's Paradise: 15th IEEE International Multi Topic Conference (INMIC)
- Social Engineering: Fatima Jinnah Women University (FJWU)
- The Need for Hackers: International Islamic University, Islamabad
- Team Riphah participated in Geek Week - a hacking competition – organized by ACM Chapter Lahore held from 19-20 April, 2016.
- Cyber Range: A Shooting Range for Cyber Warriors, Dr. Muhammad Yousaf, IEEE FIT 2018, IEEE ICET 2018.
- Experiences of Modern Hone Pots and Honey Net (Jnowing our Cyber security landscape), Dr. Muhammad Yousaf, IEEE FIT 2017, IEEE IBCAST 2018.
- Modern Cyber Warfare, Dr. Muhammad Yousaf, Waqt News, 2017.
- PIv6 Security-Myths and Reality, Dr. Muhammad Yousaf, ISOC IETF out reach program, 2017.

ISLAMABAD / RAWALPINDI

Rawalpindi Campus:
Al-Mizan IIMCT Complex,
274-Peshawar Road, Rawalpindi.
UAN: +92 (51) 111-510-510
Phone: +92 (51) 512 5162-7

I-14 Campus:
Sector I-14, Haji Camp, Islamabad.
Phone: +92 (51) 844 6000-7
UAN: +92 (51) -111-747-424

Islamabad City Campus-I:
RIU, 7th Avenue, G-7/4, Islamabad.
Phone: +92 (51) 289 1835-8
Fax: +92 (51) 289 0690

Islamabad City Campus-II:
Ground Floor, 4-Evacuee Trust Complex,
Agha Khan Road, Near Marriott Hotel,
F-5, Islamabad.
Phone: +92 (51) 843 8370-7

Female Campus Islamabad:
Street No. 5, Faiz Ahmed Faiz Road,
H-8/2, Islamabad.
Phone: +92 (51) 492 2161-5

IIMCT Pakistan Railway Hospital:
Westridge, Rawalpindi.
Phone: +92 (51) 425 9795-8
Fax: +92 (51) 425 9793

Riphah International Hospital:
Main Expressway opposite DHA II,
Sihala, Islamabad.
Phone: +92 (51) 448 6064

Islamic International Dental Hospital:
IIDH, 7th Avenue, G-7/4, Islamabad.
Phone: +92 (51) 289 1835-8
Fax: +92 (51) 289 0690

Hearts International Hospital:
192-A The Mall Road, Rawalpindi,
Phone: +92 (51) 551 0888, 551 0999
Fax: +92 (51) 558 0711

LAHORE

Township Campus:
14-Civic Center, Near Hamdard
Chowk, Township, Lahore.
Phone: +92 (42) 351 26110-8

Raiwind Campus:
Raiwind Road Campus,
12-Km, Raiwind Road, Lahore.
Phone: +92 (42) 111- 747-424

Quaid-e-Azam Campus
28-M, Qauid-e-Azam, Industrial
Estate, Kot Lakhpat, Lahore.
UAN: +92 (42) -111-747-424

FAISALABAD

Faisalabad Campus:
Satiana Road, Adjacent Fish Farm,
Faisalabad.
Phone: +92 (41) 8777- 210 & 310

MALAKAND

Malakand Campus:
Old Jamal Academy, Chakdara Road
Malakand.
Phone: 0314-3019495

UAE

UAE Campus:
RAK College of Dental Sciences,
PO Box 12973, Ras Al Khaimah, UAE
Phone: +97 (17) 222 2593
Fax: +97 (17) 222 2634

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