Empowering Syrian Undergraduates to Join MicroMasters Programs (SYMPRO): Toward Career-Focused and Affordable Graduate Studies (Short project)
Outline

• Challenges of higher Education for vulnerable groups

• MicroMasters Programs

• Project Phases
  • Needs analysis and participants selection
  • Phase 1: Local empowerment/ conducted at Yarmouk University
  • Phase 2: MOOCs-Based empowerment/ taking a real MicroMasters courses

• Challenges in the project Implementation
Higher Education Challenges

• Syrian Students’ demand for scholarships overwhelms available grants

<table>
<thead>
<tr>
<th>Program</th>
<th>Granted</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAAD</td>
<td>221</td>
<td>5,000</td>
</tr>
<tr>
<td>IIE/Jusoor</td>
<td>43</td>
<td>4,000</td>
</tr>
<tr>
<td>Chevening</td>
<td>8</td>
<td>1,213</td>
</tr>
<tr>
<td>Erasmus Mundus</td>
<td>100</td>
<td>1,000</td>
</tr>
<tr>
<td>University of Gaziantep</td>
<td>15</td>
<td>228</td>
</tr>
<tr>
<td>Said Foundation</td>
<td>80</td>
<td>208</td>
</tr>
</tbody>
</table>

Sources: UNCHR, European Union report, Al-Fanar Media, SPARK.
Higher Education Challenges

• Accessibility and Cost: Fewer than 6% of Syrian youth ages between 18 to 24 are enrolled in the Universities
Higher Education Challenges

• Joining Post-graduate (Master Level) Programs

• Students need advanced skills to get scholarships program. Especially, for post-graduate courses

• Example Requirement

• “We will identify a highly talented and qualified cohort to participate in a special certificate program.

• “Applicants will be tested in both maths and English language skills prior to being accepted to the program”
Response to Challenge 3

• A graduate level program that is
  ▪ Accessible
  ▪ Cheap
  ▪ Bridge the Gap between education and the workplace
  ▪ Counts towards getting a degree

MicroMasters
MicroMasters Programs

• A series of online graduate level courses from top universities designed to advance career.

• **MicroMasters** credentials bridge the gap between education and the workplace.

• Students may apply to the university offering credit for the **MicroMasters certificate**

• If accepted, can pursue an accelerated and less expensive Master’s Degree.

• Once you’ve successfully earned a **MicroMasters** credentials *(i.e. 50-60% of a master credits)*, you can apply to an on-campus program that recognizes the **MicroMasters** credits.

• If you're accepted, the digital credential counts as credit toward a portion of the degree, resulting in an accelerated and much more cheaper program.
How it Works?

Online Learning ➔ Proctored Tests ➔ Earn a Valuable Credential ➔ Pursue a Master’s

“\textit{The material I am learning in the MicroMasters program is useful every single day and has helped me become very effective in a leadership role.}”

— Javier, Supply Chain Engineer, Google | United States

Save Money & Time

Convenient & Flexible

Funded by the European Union
EU Regional Trust Fund ‘MADAD’
الصندوق الاستثماني الأوروبي ‘مِدّد’
Bridging the Gap between Education and the Workplace

**AdelaideX**
**Big Data**
Learn how to transform big data into business insights and solutions as you learn.

**CurtinX**
**Internet of Things (IoT)**
The IoT is leading a digital revolution for industries. Learn to design IoT solutions and

---

**UMUC, USMx**
**Bioinformatics**
Learn how to analyze biological big data to unlock the next big biotech discovery.
SYMPRO Project: Objectives and Activities

• Aims at empowering Syrian and Jordanian undergraduate with skills needed to get a MicroMasters degree

• Two demanding fields: Data Science (analytics) and Cyber Security

Undergraduate Students at Yarmouk University 2018

Total 448
Empowerment Program for Syrians Undergraduate to Join Micro Masters

- **Needs Analysis and Surveying**
  - November 2017 - End of January 2018

- **Empowerment Program in Data Science and Cyber Security (Blended Learning)**
  - February - June 2018

- **Empowerment Program in real micro masters programs (Data Science and Cyber Security)**
  - June - December 2018
# Trainee Selection

<table>
<thead>
<tr>
<th>Major</th>
<th>Number</th>
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<tbody>
<tr>
<td>Computer Science</td>
<td>4 (3 Jordanian + 1 Syrian)</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>4 (Syrian)</td>
</tr>
<tr>
<td>Information Systems</td>
<td>4 (Jordanian)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Male</td>
<td>5 Syrians + 1 Jordanian</td>
</tr>
<tr>
<td>Female</td>
<td>6 Jordanians</td>
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</table>
## Phase 1

<table>
<thead>
<tr>
<th>Training Module</th>
<th>Term</th>
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</thead>
<tbody>
<tr>
<td>Fundamentals in Cyber Security</td>
<td>Spring 2018/ Yarmouk University</td>
</tr>
<tr>
<td>Introduction to Data Science</td>
<td>Spring 2018/ Yarmouk University</td>
</tr>
<tr>
<td>A micro-Master course in Cyber Security</td>
<td>Fall 2018/ EDX platform</td>
</tr>
<tr>
<td>A micro-Master Course in Data Analysis</td>
<td>Fall 2018/ EDX platform</td>
</tr>
</tbody>
</table>
Weekly meetings with students

Project Team
1. Dr. Ahmed AlEroud (PI and Instructor of cyber Security module)
2. Dr. Khaled Nahar (Co-PI and Data science Instructor)
3. Mr. Ahmed Zyout (Administrator/E-learning System)
4. Mr. Abduallah Alzoubi (Lab Technician)
Material Available on the E-Learning System

Introduction to Cyber Security

Introduction to Data Science and Machine Learning

4 February - 10 February

11 February - 17 February

THIS PROJECT IS IMPLEMENTED UNDER THE GRANT SCHEME OF HOPES
Student’s Evaluation

### Overall number of students achieving grade ranges

<table>
<thead>
<tr>
<th>ID number</th>
<th>State</th>
<th>Started on</th>
<th>Grade</th>
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<th>Q. 2/50.00</th>
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</table>

### Samples of Student Answers

This project is implemented under the grant scheme of HOPES

Higher and further education opportunities & perspectives for Syrians

DAAD, BRITISH COUNCIL, NUFFIC

YARMOUK UNIVERSITY

16
Universities Offer MicroMasters

<table>
<thead>
<tr>
<th>University Name</th>
<th>Code</th>
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<tbody>
<tr>
<td>Australian National University (ANUx)</td>
<td></td>
</tr>
<tr>
<td>Columbia University (ColumbiaX)</td>
<td></td>
</tr>
<tr>
<td>Curtin University (CurtinX)</td>
<td></td>
</tr>
<tr>
<td>Galileo University (GalileoX)</td>
<td></td>
</tr>
<tr>
<td>The Hong Kong Polytechnic University (HKPolyUx)</td>
<td></td>
</tr>
<tr>
<td>Indian Institute of Management Bangalore (IIMBx)</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Institute of Technology (MITx)</td>
<td></td>
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<tr>
<td>Polytechnic University of Valencia (UPValenciaX)</td>
<td></td>
</tr>
<tr>
<td>Rochester Institute of Technology (RITx)</td>
<td></td>
</tr>
<tr>
<td>Université catholique de Louvain (LouvainX)</td>
<td></td>
</tr>
<tr>
<td>University of Michigan (MichiganX)</td>
<td></td>
</tr>
<tr>
<td>Wageningen University (WageningenX)</td>
<td></td>
</tr>
</tbody>
</table>

Recognition in Industry

- Adobe Systems
- Bloomberg L.P.
- Booz Allen Hamilton
- BYTE
- Carnegie Foundation
- Fidelity Investments
- Foley Hoag LLP
- Ford
- GeneDx
- Hotel Icon
- IBM
- Marketforce
- Mitchell International
- PayChex
- PwC
- Rethink Robotics
- Volvo
- Walmart
Phase 2: Students Registration in MicroMasters Credits

- Two courses
- A Micro Masters level course on Big Data analytics and Internet of things/ Offered as part of a micromasters program at Curtin University (CurtinX)/ Australia
- A microMasters level course on Cyber Security offered as part of a microMasters program in Cyber Security/ Rochester Institute of Technology (RITx)/USA
### Course on Big Data and IOT (Data Analytics)

<table>
<thead>
<tr>
<th></th>
<th>Jordanian</th>
<th>Syrian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Females</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>2</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1</td>
</tr>
</tbody>
</table>
Course Information

IOT PROGRAMMING AND BIG DATA
(IOT4X)

COURSE SYLLABUS
MicroMasters in IOT Curtin University

Welcome

Welcome to IOT4x - IoT Programming and Big Data, the fourth course in our MicroMasters in the Internet of Things program.

Complete, pass and earn a Verified Certificate in all six courses to receive your MicroMasters Credential.

- IOT1x - Introduction to the Internet of Things (IoT)
- IOT2x - IoT Sensors and Devices
- IOT3x - IoT Networks and Protocols
- IOT4x - IoT Programming and Big Data - this course!
- IOT5x - Cybersecurity and Privacy in the IoT
- IOT6x - IoT Capstone Project
Course Lecturers

Your Instructors:

Dr Johannes U. Herrmann
Hannes is a Senior Lecturer who teaches computing at Curtin University. He has worked at both the Sarawak and Bentley campuses of Curtin, as well as having worked for UWA, Murdoch and ECU in the past. He received his B.Sci (Hons) and MSc (Research) from UWA and his Ph.D. from Curtin. He is involved in several ongoing projects relating to the teaching of computing-related information using technology.

Dr Valerie Maxville
Valerie Maxville is an experienced educator who is passionate about technology and its potential. She enjoys making technology accessible - taking on the challenge of communicating complex concepts to diverse audiences.

Valerie lectures core units in Data Science and Computer Science at Curtin University. From 2007 to 2016 Valerie coordinated and delivered training, internships, outreach and user engagement at the Pawsey Supercomputing Centre (VEC) to increase awareness and uptake of computational science. Valerie holds a PhD in Computer Science (Software Engineering) and an Honours degree in Computer Science. As an industry volunteer, Valerie actively promotes careers in computing and local industry development. She is a Fellow of the Australian Computer Society (ACS) and a Senior Member of the Institute for Electrical and Electronic Engineers (IEEE).

Dr Aloke Phatak
Aloke is an engineer-turned applied statistician who obtained his BSc, MASc, and PhD from the University of Waterloo in Canada. He spent more than 20 years at the CSIRO, where he carried out research in applied statistics, worked with a wide range of industries and in diverse areas such as industrial statistics, biomarker discovery, and climate extremes; and developed short courses for practicing engineers and scientists.

At Curtin he co-ordinates the Data Science Major, carries out consulting with industry, and is always on the lookout for new ways of teaching statistics and data science.
Course Syllabus

### Assessment:

<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>% of Final Grade</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module quizzes (x 3)</td>
<td>3 x 10% = 30%</td>
<td>12 November 2018 (23:30 UTC)</td>
</tr>
<tr>
<td>Final quiz</td>
<td>20%</td>
<td>12 November 2018 (23:30 UTC)</td>
</tr>
<tr>
<td>Practical task 1 (Module 1)</td>
<td>15%</td>
<td>12 November 2018 (23:30 UTC)</td>
</tr>
<tr>
<td>Practical task 2 (Module 2)</td>
<td>15%</td>
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</tr>
<tr>
<td>Practical task 3 (Module 4)</td>
<td>20%</td>
<td>12 November 2018 (23:30 UTC)</td>
</tr>
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</table>

### Course Schedule:

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1      | Introduction to Big Data from the IoT | Module 1 quiz (10%)  
Practical task 1 (15%) |
| 2      | Data at the Edge                    | Module 2 quiz (10%)  
Practical task 2 (15%) |
| 3      | Data in the Cloud                   | Module 3 quiz (10%)         |
| 4      | Obtaining, Visualising and Analysing Data | Practical task 3 (20%) |
| 5      | Summary and assessment              | Final quiz (20%)            |
Reasons For Selecting the Course

• Students will learn how to program in Python (Top in Job Posting)
Reasons For Selecting the Course (Big Data and IOT)

TECHNOLOGICAL

- Mobile internet, cloud technology
- Processing power, Big Data
- New energy supplies and technologies
- Internet of Things
- Sharing economy, crowdsourcing
- Robotics, autonomous transport
- Artificial intelligence
- Adv. manufacturing, 3D printing
- Adv. materials, biotechnology

Note: Names of drivers have been abbreviated to ensure legibility.
Course Interface on EDX

IoT Programming and Big Data

Module 1: Introduction to Big Data from the IoT

1.0 Introduction
1.1 Big Data
1.2 Programming
1.3 Programming in Tinkercad®
1.4 Case study: Soter Spine

Case study: Soter Spine

Course Tools
- Bookmarks
- Updates

Important Course Dates
- Today is Oct 20, 2018 16:48 EEST
- Course End in 3 weeks - Nov 12, 2018
- Certificate Available in 3 weeks - Nov 14, 2018

After this date, course content will be archived.
Day certificates will become available for passing verified learners.
Sample of Practical tasks

Programming in Tinkercad®

ACTIVITY: Programming in Tinkercad®

Now you will do two guided activities in Tinkercad®.

We strongly encourage you to work through both activities, as it will help you to complete your assessments for this course.

Tinkercad® is a web based application for making 3D designs and electronic circuits.

If you are already familiar with Tinkercad® from previous IoT courses, please download and follow the instructions below.

Activity 1
This activity introduces you to programming a microcontroller using code blocks to switch on an LED in response to pushing a button.

- IoT6x_Module1_Activity1

Activity 2
This activity will instruct you in an example of using code blocks for more complex programming by reading from an input, storing the reading in a variable, and then adjusting that value before using it to control a device at the output.

- IoT6x_Module1_Activity2

Activity 1

This project is implemented under the grant scheme of HOPES

HOPES: Higher and Further Education Opportunities & Perspectives for Syrians

DAAD, British Council, Campus France, Nuffic

Yarmouk University
Simulating Programming tasks
Quiz Questions

<table>
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<tr>
<th>Rank</th>
<th>Database Management System</th>
<th>Database Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oracle</td>
<td>Relational DBMS</td>
</tr>
<tr>
<td>2</td>
<td>MySQL</td>
<td>Relational DBMS</td>
</tr>
<tr>
<td>3</td>
<td>Microsoft SQL Server</td>
<td>Relational DBMS</td>
</tr>
<tr>
<td>4</td>
<td>PostgreSQL</td>
<td>Relational DBMS</td>
</tr>
<tr>
<td>5</td>
<td>MongoDB</td>
<td>Document store</td>
</tr>
<tr>
<td>6</td>
<td>DB2</td>
<td>Relational DBMS</td>
</tr>
<tr>
<td>7</td>
<td>Redis</td>
<td>Key-Value store</td>
</tr>
<tr>
<td>8</td>
<td>Elasticsearch</td>
<td>Search Engine</td>
</tr>
<tr>
<td>9</td>
<td>Microsoft Access</td>
<td>Relational DBMS</td>
</tr>
<tr>
<td>10</td>
<td>Cassandra</td>
<td>Wide column store</td>
</tr>
</tbody>
</table>

**Question 1**

2.0/2.0 points (graded)

In the table above, how many of the top 10 most popular databases belong to the No-SQL family of databases?

- 0
- 1

**THIS PROJECT IS IMPLEMENTED UNDER THE GRANT SCHEME OF HOPES**
Question 5 - Information

The whitepaper "Intel IoT Gateways: Pulling Data from a Temperature Sensor Using a Python Script" is a getting started guide for working with Gateways and Python.

The code includes statements to delay the processing to reduce data traffic and storage. Study the following code and answer the question that follows.

```python
# /usr/bin/python
import sys
from time import sleep
from Phidgets.Devices.InterfaceKit import *
from Phidgets.Devices.TemperatureSensor import *
TEMP_SENSOR_PORT = 0

# Define an error catching function so we can call it on "try...except" blocks
def LocalErrorCatcher( event):
    print( "Phidget Exception: " + str(e.code) + ", " + str(e.details) + ",",
    Exiting....")

exit(1)

# Get the temperature sensor reading from port TEMP_SENSOR_PORT of the Sensor Kit
def GetTemp( device , outfile , TEMP_SENSOR_PORT):
    current_time = datetime.now()
    # Get the board temperature in Celsius by reading sensor input and applying
    conversion formula
    ambientTemp = ( device.getSensorValue( TEMP_SENSOR_PORT ) * .3222 ) - 62.111

    # Write the data to the text file
    time_and_temp = ( str(current_time) + ", " + str(ambientTemp) + "\n"
    print( "%s %s%\n" % time_and_temp)
    outfile.write(time_and_temp)
    sys.stdout.flush()

    # Clear and open the data file for writing
    outfile = open( "phidgets_temperature_data.txt" , "w" )
    # Write a header to the text file first thing
    outfile.write( "Time Temperature (C)\n"
```

**Question 5**

20/20 points (graded)

What change would be made to the code to sample the data every minute instead of every second?

- Line 7, change TEMP_SENSOR_PORT = 6 to TEMP_SENSOR_PORT = 60
- Line 39, change device.waitForAttach(10000) to device.waitForAttach(600000)
- Line 40, change device.setDataRate(TEMP_SENSOR_PORT, 4) to device.setDataRate(TEMP_SENSOR_PORT, 60)
- Line 49, change sleep(1) to sleep(60) ✗
Student Certificates

VERIFIED
CERTIFICATE OF ACHIEVEMENT

This is to certify that

Abdullah Omar Almokdad

successfully completed and received a passing grade in

IOT4x: IoT Programming and Big Data

a course of study offered by CurtinX, an online learning initiative of Curtin University through edX.

edX

VERIFIED CERTIFICATE
Issued: November 14, 2018

VALID CERTIFICATE ID
6be0c9c21328d3bb95d8e33ba80ac9f9

Professor Jill Downie
Deputy Vice-Chancellor, Academic
Curtin University

This project is implemented under the grant scheme of HOPES

HIGHER AND FURTHER EDUCATION OPPORTUNITIES & PERSPECTIVES FOR SYRIANS

YARMOUK UNIVERSITY
Course 2 on Cyber Security

- A MicroMasters Program on Cyber Security
- Offered by RIT (Rochester Institute of Technology)

Courses

**Cybersecurity Fundamentals**
Learn cybersecurity fundamentals, including how to detect threats, protect systems and networks, and anticipate potential cyber attacks.
[View the Cybersecurity Fundamentals course](#)

Starts on January 8, 2019

**Computer Forensics**
Learn the process, techniques and tools for performing a digital forensics investigation to obtain data related to computer crimes.
[View the Computer Forensics course](#)

Starts on October 9, 2018

**Cybersecurity Risk Management**
Learn key principles of risk analysis, risk assessment and risk mitigation for information security using both qualitative and quantitative methodologies.
[View the Cybersecurity Risk Management course](#)

Starts on October 9, 2018 (more dates)

**Network Security**
Learn the process of network security, including intrusion detection, evidence collection, network auditing, and contingency planning against attacks.
[View the Network Security course](#)

Starts on October 9, 2018

**Cybersecurity Capstone**
Demonstrate the knowledge and skills acquired in the Cybersecurity MicroMasters Program.
[View the Cybersecurity Capstone course](#)

Starts on January 8, 2019 (more dates)
Demand in Cyber Security Jobs

Demand for cyber security jobs

This project is implemented under the grant scheme of HOPES
Network Security Course

<table>
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</thead>
<tbody>
<tr>
<td>Males</td>
<td>5</td>
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<td>Females</td>
<td>0</td>
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</table>

<table>
<thead>
<tr>
<th>Major</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>4</td>
</tr>
</tbody>
</table>
Cyber Security MicroMasters Program

Gain the essential knowledge and expertise in network security and forensics needed for cybersecurity in enterprise environments.

In this Cybersecurity MicroMasters Program, you will learn:

- Fundamentals of networks;
- Systems administration;
- How to protect computer networks and other systems by mitigating vulnerabilities and monitoring intrusions;
- How to perform digital forensic analysis of cybercrime by gathering information on the nature and extent of the attack for presentation in a court of law, as well as assessing the extent of the damage to an organization;
- Techniques of risk analysis;
- Risk assessment and vulnerability assessment.

The MicroMasters Program capstone experience for verified learners entails practical demonstration of these skills.

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Average Length</td>
<td>8 weeks per course</td>
</tr>
<tr>
<td>Effort</td>
<td>10-12 hours per week per course</td>
</tr>
<tr>
<td>Number of Courses</td>
<td>5 Courses in Program</td>
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<tr>
<td>Subject</td>
<td>Computer Science</td>
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<tr>
<td>Institution</td>
<td>Rochester Institute of Technology</td>
</tr>
<tr>
<td>Institution Offering Credit</td>
<td>Rochester Institute of Technology</td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
</tr>
<tr>
<td>Video Transcripts</td>
<td>English</td>
</tr>
<tr>
<td>Price (USD)</td>
<td>$1000 USD $1080 USD for the entire program. You save $120 USD.</td>
</tr>
</tbody>
</table>
Course Syllabus

• Unit 1: Packet Sniffing
• Unit 2: Password Cracking
• Unit 3: Port Scanning
• Unit 4: Exploits and Exploiting
• Unit 5: Access Control Lists
• Unit 6: Snort
• Unit 7: DHCP, DNS, and Switch Attacks and Mitigations
• Unit 8: Man in The Middle Attacks and Mitigations
Course Evaluation

• Weekly Readings

• Analyze attack/defend scenarios and determine the effectiveness of particular defense deployments against attacks.

• Weekly quizzes
Packet Sniffing Unit Quiz

Packet Sniffing Unit Quiz

The result of this graded quiz is part of your final grade. You are only allowed one attempt per question.

This quiz is open to all students. Students who are seeking a verified certificate must achieve a final course grade average of at least 80%.

If you have a question about any of the quiz questions, do not post about it in a discussion. Please contact the Course Team directly by email. Please include the content of the question you are asking about in your email.

Unit 1 Question

1/1 point (graded)

When an encrypted SSL/TLS segment is sent, can a packet sniffer still read the source and destination IP addresses of the packet?

- Always
- Never
- Only if the private key is installed
- Only if the public key is installed
Weekly Activities
VERIFIED
CERTIFICATE of ACHIEVEMENT

This is to certify that

Mohammad Saed Al REFAE

successfully completed and received a passing grade in

CYBER504x: Network Security

a course of study offered by RiTx, an online learning initiative of Rochester Institute of Technology through edX.

David C. Munson Jr.
President
Rochester Institute of Technology
EDX Piloting(trial) Phase

• 5 Students are registered in a course on Cyber Security to get familiar with the environment

• Communication with Students

السلام عليكم
ارجو العلم بأن محتوى الوحدة الأولى متوفير على موقع edx
ومن ثم الى المساق
https://courses.edx.org/courses/course-v1:RITx+CYBER501x+2T2018/course/

وعمل التالي
1. التعريف بانفسكم باللغة الإنجليزية
2. هناك مجموعة من الفيديوهات لشرح الوحدة الأولى "مقدمه إلى الأمن السيبراني". وتحتوي الفيديوهات الكثير من الأمثلة الواقعية لعمليات اختراق. حددت على مستوى العالم
3. النص الموجود مع كل فيديو مرفق في هذا الإيميل يحمل اسمه "محتوى الوحدة الأولى"
4. النص هو فيلم "محتوى الوحدة الأولى". هذا الفيديو يشرح الاتجاهات التي تحدث عن موضوع الاختراق. يشرح المدرس كيفية التحكم في آلاتكم لاحترام النظام حماية من الاختراق. ويعطي مثال حي على أحد هذه المواقع كنائي

My name is ... and I am interested in Cyber Security
EDX Piloting Phase

• Verified track (150 USD)

• Paid for two students
• One student received the certificate
Certificate (MicroMasters Cyber in Security)

This is to certify that

Islam Alomari

successfully completed and received a passing grade in

CYBER501x: Cybersecurity Fundamentals

a course of study offered by RITx, an online learning initiative of Rochester Institute of Technology through edX.

David C. Munson Jr.
President
Rochester Institute of Technology

edX
VERIFIED CERTIFICATE
Issued August 2, 2018

VALID CERTIFICATE ID
aa94d9355a0c4638824aaa37c36c1bd7

This project is implemented under the grant scheme of HOPES

HOPES
Higher and Further Education Opportunities & Perspectives for Syrians
DAAD
BRITISH COUNCIL
CAMPUS FRANCE
NUFFIC

YARMOUK UNIVERSITY
Project Dissemination Activities

Done in Collaboration with the Refugee Center at Yarmouk Universities
Funded by the European Union
EU Regional Trust Fund 'MADAD'
الصندوق الاستثماري الأوروبي مداد

Certificate of Achievement

This certificate is to acknowledge that

Murad Mohammad Alribdawi

Has successfully completed

The academic advanced training on joining EDX Micromasters programs, which was held at Yarmouk University in collaboration with HOPES project between 3/2/2018 to 15/12/2018. The training was supported by EU Regional Fund MADAD

December, 2018

Signed, Prof. Dr. Zeidan Kafafi, President

This project is implemented under the grant scheme of HOPES

Higher and Further Education Opportunities & Perspectives for Syrians

DAAD, British Council, NUFFIC, Yarmouk University
Challenges

• Running the project with small budget (8000 Euros). 25% of them are overhead cost
• Students can only take a course once
• The cost of an entire MicroMasters Programs is 1500-2000 USD per student. Not that expensive!!
• It is given our small budget
• Time of offering courses is not always convenient for every student
Dissemination activities

Yarmouk University in Northern #Jordan, very close to the border. Good talk w/ Syrian undergrad IT students, gaining their master credits thanks to #HOPES funded initiative involving MOOCs & short class courses.
Dissemination activities