

Departmental Activities Report

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Computer Engineering Department,
Engineering Faculty, Academic Year
of 2019-2020



General Statement:

By Mr. Safwan Mawlood

It is with great pleasure that I share with you the academic year of 2019-2020 Departmental Activities report for the Computer Engineering Department, Tishk International University. It is through careful planning and strong commitment by our department staff and students that we have maintained our normal enrollment and graduation rates at the undergraduate levels despite all challenges faced during this year's pandemic. Moreover, we have increased the number of published researches through a hardworking and concrete plan. Two department members joined our department during this year which added a great deal of diversity to our instructional program and deepened our research profiles in the area of computational economics, computer security and software/system engineering. During this year, many academic and nonacademic events were conducted by our department.

As I share with you the department's activities report, I stress our continued commitment to the highest levels of excellence in both teaching, research and social activities and our unyielding mission to further the reach of Computer Engineering as they continue to impact our world in positive and profound ways.

Prepared by	Reviewed by	Approved by
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Nanakaly Hospital project – Contract renewal

Type of the Activity: Community - University partnership project

Code: (NUR 6.3)

Date: 23 October, 2019

Venue: Nanakaly Hospital - Erbil

Brief Description:

The department of Computer Engineering, with the help and cooperation of the Deanery of Students office of Tishk International University, have proudly renewed their partnership contract with Nanakaly hospital for the duration of 6 months on Wednesday, 23rd of October, 2019.

This community project is mainly aimed at helping the cancer-stricken children by providing the hospital with a monthly salary for two nurses, in light of the staff and resources shortages experienced within the hospital.

The partnership contract was first signed on February 9th, 2017 and the project is on-going ever since with the help of the generous donations provided by the staff and students of Tishk International University.

The department will soon be hosting a lunch gathering for the children effected as well as giving regular visits to the hospital to raise the level of awareness among the University staff and students about the realities and special needs of those children.



Orientation Program for first grade

Type of the Activity: Seminar

Code: DA 9

Date: 10 November, 2019

Venue: Tishk International University

Brief Description:

The department of Computer Engineering have organized an orientation program for their newly enrolled first grade students on Sunday, November 10th, 2019 in hall #331 in Tishk International University's Main Building.

The program started with a short yet informative presentation by the Dean of Students representative in which their activities, events and clubs were briefly covered.

Later on, Mr. Mousa Masoud, lecturer from Computer Engineering department, gave an overview on the department's history, mission and vision, facilities as well as the social and scientific activities that are regularly held during each academic year along. The international accreditation which was awarded to the department was also highlighted.

The research assistants, Mr. Mohammed Salam and Ms. Israa Nazhat, further explained the importance of pursuing a degree in computer engineering in terms of the wide spectrum of job opportunities available to its own graduates. The curriculum was thoroughly explained along with the university and department's rules and regulations, academic advising, department's webpage and GPA calculation.

The program was concluded with a tour around the department and the main building facilities, lecture halls and laboratories.



Field Ready: Erbil Makerspace visit

Type of the Activity: Joint Project

Code: (NUR 3.5 a)

Date: 19 November, 2019

Venue: Re:Coded – Erbil Makerspace

Brief Description:

As part of the on-going developments within the faculty of Engineering of Tishk International University and in pursuit of strengthening ties and collaborations between academia and fast-growing initiatives. The faculty of Engineering have organized a visit to Field Ready: Erbil Makerspace on Tuesday, November 19th, 2019.

A delegation from the department of Computer Engineering represented by Dr. Mohammed Aldabagh and Dr. Yasir Hashim accompanied other delegates from various departments within the faculty along with Dr. Halit Vural, the Dean of Engineering Faculty.

Ms. Ravin Rizgar, Technical team-leader in Erbil Makerspace gave an informative presentation about the organization's aim in providing the youth with the opportunity to gain practical digital fabrication skills, which, in turn, will boost their future employability, opportunities to engage in entrepreneurship, and prospects for peace.

Erbil Makerspace is a place to learn, create and develop products using physical fabrication equipment, such as 3D printers (plastic and rubber), CNC machines (for etching PCBs) and laser-cutters (to work with wood, acrylic and metal sheets), microprocessors and circuitry parts and soldering materials. The makerspace will further promote and enhance the student learning environment and support provided for some of the relevant departmental courses and will also inspire and widen the students' imagination, skills and creativity spectrum.



Research Methodology Workshop

Type of the Activity: Workshop

Code: (NUR 2.7)

Date: 01 December, 11 December 2019

Venue: Tishk International University

Brief Description:

The department of Computer Engineering organized a two-session Research Methodology workshop by Dr. Mohammed Aldabagh on December 1st and December 11th, 2019.

This workshop was aimed to provide fourth year students with a complete guide on how to write their BSc final year project thesis. Participants learned the scientific methods required to be followed, how to search scientific reference and how to use and organize them in their report, the workshop also provided enriched details on how to prepare their final presentation of their project.

The workshop also highlighted the students' duties in both first and second semester and further explained the department's report template which is required to be followed when writing chapters one through five.

This workshop was held over two days, where the first session, which was held on December 1st, focused on providing the students with the skills to research and access scientific articles to be used for writing chapters one through three.

The second session, which was held on December, 11th, was aimed at providing the students with the skills needed to collect and organize their references as well as tips and guides on how to prepare their presentation slides.

The students were also given an assignment in which they applied the skills obtained within the workshop to write and submit chapter one, two and three, respectively, which will be reviewed by the group supervisor as well as the evaluation committee.



Cyber Security Workshop (Protect Yourself Online)

Type of the Activity: Workshop

Code: (NUR 2.7)

Date: 20 February 2020

Venue: Tishk International University

Brief Description:

Global Shapers – Erbil Hub and in collaboration with the department of Computer Engineering, have organized a workshop on Cyber Security on Thursday, February 20th, 2020 at Tishk International University. The workshop was presented by Mr. Saadulla D. Ahmed, Founder of Suncode IT Solutions and Consultancy Co and was held over two sessions from 11:00 AM – 12:50 PM in Room #202 and from 1:30 – 2:30 PM in Lab #241.

Computer security, cybersecurity or information technology security is the protection of computer systems and networks from the theft of or damage to their hardware, software, or electronic data, as well as from the disruption or misdirection of the services they provide. The field is becoming more important due to increased reliance on computer systems, the Internet and wireless network standards such as Wi-Fi, and due to the growth of “smart” devices, including smartphones, televisions, and the various devices that constitute the “Internet of things”.

Owing to its complexity, cyber security is also one of the major challenges in the contemporary world. In this workshop, an overview of how to analyze and monitor potential computing threats were highlighted, along with the definitions of malwares, Spams and Keyloggers and the different types of hacker attack.

During the first session the participants learned the necessary steps needed to protect their systems and network infrastructures and implement security solutions as well as the most known ways that the hackers can socially engineer at their work or home through email, mobile phones, browsing, downloaded files, connected home devices.

During the lab session, one of the most common hacking ways used to trick users into giving access to their personal social media accounts were highlighted and thoroughly explained. Giving the participants a clear idea on how these attacks occur and the necessary actions needed to be taken to secure their accounts.

The department of Computer Engineering extends its gratitude to Global Shapers – Erbil hub for the immense effort put into making this workshop and looks forward to strengthen its collaborations by holding future events and workshops within the department and the university as a whole.



Google Hash Code 2020

Type of the Activity: Academic Competition

Code: DA 6

Date: 20 February 2020

Venue: Tishk International University

Brief Description:

Hash Code is a team-based programming competition, organized by Google, for students and professionals around the world. Participants pick their team and programming language and Google picks an engineering problem for them to solve.

Hash Code is open to university students and industry professionals from all around globe. Participants must compete in a group of two, three, or four members (each group referred to as a “Team”). Participants must form their team in the Judge System and each participant must be above 18 years old. The Judge System is an online platform where participants will form your team, join a hub, practice, and compete during the rounds. Participation is done through an online registration form.

Hubs are meetups where teams from the same university, office or local area can come together to compete in the Online Qualification Round side-by-side. Participating from a hub adds a bit more fun and excitement to the competition and is a great way to meet new people.

Tishk International University has been involved since 2016 with opening its official hub, our hub is known as the first Hash code hub in Iraq and Kurdistan which is organized by Computer Engineering department.

Coders all over the world are given their first problem to tackle through an Online Qualification Round. Participants also get to watch a YouTube live-stream to be introduced to the problem, and the teams usually have four hours to solve an optimization problem using the programming language and tools of their choice. Teams can compete from a local hub or another location of their choice. The top teams from the Online Qualification Round will be invited to the Final Round at a Google office, where they’ll work together to solve another challenge and compete for cash prizes.

The 7th Hash code edition’s Online qualification round was conducted on February 22,2020 at 8:30 PM with the participation of four hubs from Iraq and Kurdistan including (University of Kurdistan Hawler hub, American University of Iraq – Sulaimani hub, Baghdad hub and Tishk International University hub).

Students and staff of Tishk International University’s Computer Engineering and IT department participated in the competition through the university hub. One of our hub’s participating teams named (“Optimal Tech”) with three members (Rebin Mohammed – Research Assistant – IT department ,Aso Othman, Satar Dawood Mirkhan), made yet another successful comeback and ranked second on Iraq and Kurdistan and first on TIU hub with a score of 26,019,055 beating the other 3 hubs in the region.

The department of Computer Engineering extends its gratitude and appreciation to Tishk International University students and staff for their valuable participation and hard work and congratulates them on getting one of the highest ranks on Kurdistan and Iraq.



hash code

	Team	Hub	Score
1.	AlHashSet		26,844,297
2.	Optimal Tech.	Iraq / Tishk International University (TIU)	26,019,055

Blockchain in Education: Workshop

Type of the Activity: Workshop

Code: (NUR 2.7)

Date: 27 February, 2020

Venue: Tishk International University

Brief Description:

As a part of the panels and workshops held and organized in the context of the 6th International Engineering Conference (IEC 2020) and in collaboration with the department of Computer Engineering. The Blockchain in Education workshop was presented by Dr. Alyaa Al-Barrak, from the department of Computer Science at the University of Baghdad on 27th of February, 2020 in Tishk International University.

The workshop highlighted the importance and concerns surrounding the verification and security of data and records within the education sector where data infringements target the records of students to steal data which can be sold by hackers or employed to make unauthentic identities.

Dr. Al-Barrak emphasized the importance of using the blockchain technology (BCT) as a utility to protect students records and identities along with making these attacks ineffective. Since data digitization is becoming widely used, blockchain technology could be vital in ensuring the privacy of students.

The workshop also shed light on the possibility of using (BCT) to plan the strategy of the funding and to reward students for their achievements. And to additionally be employed to identify how the university can be restructured according to employers and students' new requirements and in turn, boost the system of education in by securing information networking, sharing, and storage. And thus, providing a safer, easier, and faster processes within the university.

