www.iup.edu/iupgencyber

IUP GENCYBER COMBINATION CAMP STUDENT FLYER

Advantages

Offered at no cost!

Raspberry Pi for each participant

Instruction and mentorship from IUP faculty and other experts!

Skills & knowledge for a growing career field!

Apply NOW space is limited!

OFFERED REMOTELY AUGUST 2-6, 2021

IUP GENCYBER: CYBERSECURITY CAMP FOR MIDDLE AND HIGHSCHOOL STUDENTS

- Learn detailed information about cybersecurity basics
- Learn hacking defense techniques
- Acquire skills to land your dream job
- Do any of the topics interest you? Apply today!

Through this opportunity, you will learn safe online behavior, increase knowledge of cyberspace, and explore cybersecurity careers.

Questions?

gen-cyber@iup.edu

Program Directors

Waleed Farag, Ph.D.
Computer Science

Raj Ezekiel, Ph.D.
Computer Science

Xinwen Wu, Ph.D.
Computer Science

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IUP GENCYBER COMBINATION CAMP TEACHER FLYER

Advantages

Offered at no cost!

A $750 Stipend for each participant!

Act 48 Credits!

Multidisciplinary cybersecurity teaching skills, and modules to be used in the classroom!

Apply NOW space is limited!

OFFERED REMOTELY AUGUST 2-6, 2021

IUP GENCYBER: CYBERSECURITY CAMP FOR MIDDLE AND HIGHSCHOOL TEACHERS

- Learn detailed information about cybersecurity
- Learn about promising careers for students
- Acquire skills to change the future of your students
- Do any of the topics interest you? Apply today!

Through this opportunity, you will learn safe online behavior, become part of the solution to the nation's shortage of skilled cybersecurity professionals, and help inspire young people to direct their talents to cybersecurity, a profession of critical importance to our nations future

Questions?
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Computer Science

Xinwen Wu, Ph.D.
Computer Science

SUMMER 2021 GENCYBER CAMP

ADVANTAGES FOR STUDENTS

- Offered at no cost!
- A small-sized computer (Raspberry Pi) kit
- Participants will join from the comfort of their homes using their own computers
- Instruction and mentorship from IUP faculty and other experts!
- Skills and knowledge for a growing career field!

ADVANTAGES FOR TEACHERS

- Offered at no cost!
- **$750 stipend will be to awarded to each teacher participants after completing all program requirements.**
- ACT 48 Credits **(30+ hours based on actual attendance)** will also be given
- Multidisciplinary cybersecurity teaching skills, and modules to be used in class!

HOW TO APPLY

Applications are accepted online only. To apply or view other important information, please visit:

www.iup.edu/iupgencyber

CAMP DATES

Combination Camp
August 2 to 6, 2021

PROGRAM DIRECTORS

Dr. Waleed Farag, Director, IUP Institute for Cybersecurity and Professor of Computer Science

Dr. Soundararajan Ezekiel, Professor of Computer Science

Dr. Xinwen Wu, Associate Professor of Computer Science
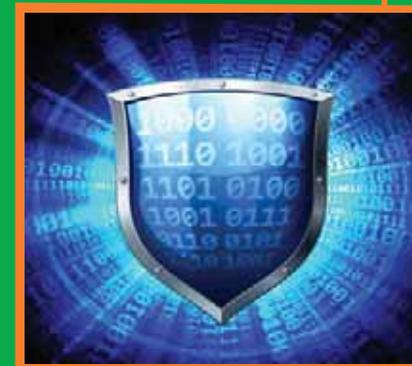
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IUP GENCYBER

SUMMER 2021 PROGRAM

Gen Cyber is a national initiative that is supported by the National Science Foundation and the National Security Foundation. This program has the following objectives:

- Increase interest in cybersecurity careers and diversity in the cybersecurity workforce of the nation

- Help all students understand correct and safe on-line behavior.

- Improve teaching methods for delivering cybersecurity content for K-12 curricula

THE FUNDED GRANT

Under the leadership of Dr. Waleed Farag, grant PI and the director of the IUP Institute for Cybersecurity, IUP, along with a selected handful of national universities, has been awarded funding to hold a combination summer camp for middle and high school students and teachers in summer 2021.

This funded project will focus on fostering and sustaining a strong cybersecurity culture in high and middle school students and teachers in Pennsylvania and beyond through a holistic approach. The combined camp will start by a general introduction to fundamental cybersecurity concepts then delve into the technicality of the field. Topics covered include programming, social engineering, social media security, ethics, cybersecurity career, and network security.

CAMP PROGRAM SUMMARY

This project will host a FREE (no cost to participants), five-weekday day-camp in summer 2021. Instruction will be delivered by a team of professors and high/middle school teachers with numerous backgrounds but established expertise in cybersecurity teaching, research, and K-12 education. Camp will include:

- Upon completion of camp, participants will have a strong understanding of cybersecurity in addition to mastering basic skills that help them be safer online.

- 65 projected participants. 50 in the student group and 15 in the teacher group.

- 90 teaching hours proposed (30 for each group at a rate of six hours per day).

- An engaging content delivery approach that includes direct instruction, group activities, structured discover, and hands-on laboratory.

CYBERSECURITY CAMP DAILY SCHEDULE

DAY 1 - AUGUST 2, 2021

Time	Middle School Students	High School Students	Teachers
9:00 a.m. to 9:55 a.m.	Welcome Remarks, Introduction to team members, Orientation and Logistics Cybersecurity Concepts - *Dr. Farag*		
9:55 a.m. to 10:00 a.m.	BREAK		
10:00 a.m. to 10:55 a.m.	Welcome Remarks, Introduction to team members, Orientation and Logistics Cybersecurity Concepts - *Dr. Farag*		
10:55 a.m. to 11:00 a.m.	BREAK		
11:00 a.m. to 11:55 a.m.	Exploring the Six Cybersecurity Concepts *Mr. Stewart*	Exploring the Six Cybersecurity Concepts *Mrs. Gentile*	Exploring the Six Cybersecurity Concepts *Dr. McGinty*
11:55 a.m. to 12:00 p.m.	BREAK		
12:00 p.m. to 12:55 p.m.	Exploring the Six Cybersecurity Concepts *Mr. Stewart*	Exploring the Six Cybersecurity Concepts *Mrs. Gentile*	Exploring the Six Cybersecurity Concepts *Dr. McGinty*
12:55 p.m. to 1:30 p.m.	LUNCH		
1:30 p.m. to 2:25 p.m.	Safe, Secure, and Still Social *Mr. Stewart, Mrs. Gentile*	Networking Ecosystem - Trusting and Authenticating *Dr. Wu*	Social Engineering via Open-Source Intelligence *Dr. Ezekiel*
2:25 p.m. to 2:30 p.m.	BREAK		
2:30 p.m. to 3:30 p.m.	Safe, Secure, and Still Social *Mr. Stewart, Mrs. Gentile*	Networking Ecosystem - Trusting and Authenticating *Dr. Wu*	Social Engineering via Open-Source Intelligence *Dr. Ezekiel*

CYBERSECURITY CAMP DAILY SCHEDULE — DAY 2 - AUGUST 3, 2021

	Middle School Students	High School Students	Teachers
9:00 a.m. to 9:55 a.m.	Programming Security Applications (via Raspberry Pi) *Dr. Farag*	Safe, Secure, and Still Social *Mr. Stewart, Mrs. Gentile*	Network Traffic Investigation *Dr. Wu*
9:55 a.m. to 10:00 a.m.	BREAK		
10:00 a.m. to 10:55 a.m.	Programming Security Applications (via Raspberry Pi) *Dr. Farag*	Safe, Secure, and Still Social *Mr. Stewart, Mrs. Gentile*	Network Traffic Investigation *Dr. Wu*
10:55 a.m. to 11:00 a.m.	BREAK		
11:00 a.m. to 11:55 a.m.	Exploring Information Hiding (Steganography) *Dr. Ezekiel*	Network Traffic Investigation *Dr. Wu*	Integrating Cybersecurity Concepts into your Lesson Plans Part I *Dr. McGinty*
11:55 a.m. to 12:00 p.m.	BREAK		
12:00 p.m. to 12:55 p.m.	Exploring Information Hiding (Steganography) *Dr. Ezekiel*	Network Traffic Investigation *Dr. Wu*	Integrating Cybersecurity Concepts into your Lesson Plans Part I *Dr. McGinty*
12:55 p.m. to 1:30 p.m.	LUNCH		
1:30 p.m. to 2:25 p.m.	Capture the Flag Session *Guest Speaker: Ms. Alex Ivanov, CISSP, OSCP, CEH, Senior Consultant, MBL Technologies*		
2:25 p.m. to 2:30 p.m.	BREAK		
2:30 p.m. to 3:30 p.m.	Capture the Flag Session *Guest Speaker: Ms. Alex Ivanov, CISSP, OSCP, CEH, Senior Consultant, MBL Technologies*		

CYBERSECURITY CAMP DAILY SCHEDULE — DAY 3 - AUGUST 4, 2021

Time	Middle School Students	High School Students	Teachers
9:00 a.m. to 9:55 a.m.	Perfect The Plan — Mrs. Gentile, Dr. McGinty, Mr. Stewert		
9:55 a.m. to 10:00 a.m.	BREAK		
10:00 a.m. to 10:55 a.m.	Perfect The Plan — Mrs. Gentile, Dr. McGinty, Mr. Stewert		
10:55 a.m. to 11:00 a.m.	BREAK		
11:00 a.m. to 11:55 a.m.	Fast, Flexible Minds — Mrs. Gentile	Programming Security Applications (via Raspberry Pi) — Dr. Farag	Integrating Cybersecurity Concepts into your Lesson Plans Part II — Dr. McGinty
11:55 a.m. to 12:00 p.m.	BREAK		
12:00 p.m. to 12:55 p.m.	Fast, Flexible Minds — Mrs. Gentile	Programming Security Applications (via Raspberry Pi) — Dr. Farag	Integrating Cybersecurity Concepts into your Lesson Plans Part II — Dr. McGinty
12:55 p.m. to 1:30 p.m.	LUNCH		
1:30 p.m. to 2:25 p.m.	Network Traffic Investigation — Dr. Wu	Social Engineering via Open-Source Intelligence — Dr. Ezekiel	Safe, Secure, and Still Social — Mr. Stewart
2:25 p.m. to 2:30 p.m.	BREAK		
2:30 p.m. to 3:30 p.m.	Network Traffic Investigation — Dr. Wu	Social Engineering via Open-Source Intelligence — Dr. Ezekiel	Safe, Secure, and Still Social — Mr. Stewart

Time	Middle School Students	High School Students	Teachers
9:00 a.m. to 9:55 a.m.	**Title Threats, Vulnerabilities, and Attacks** *Guest Speaker: Mr. Dom Glavach, Chief Security Officer and Chief Strategies at CyberSN*		
9:55 a.m. to 10:00 a.m.	BREAK		
10:00 a.m. to 10:55 a.m.	**Title Threats, Vulnerabilities, and Attacks** *Guest Speaker: Mr. Dom Glavach, Chief Security Officer and Chief Strategies at CyberSN*		
10:55 a.m. to 11:00 a.m.	BREAK		
11:00 a.m. to 11:55 a.m.	**Cybersecurity Concepts with Coding Part I** *Mr. Stewart, Mrs. Gentile*	Red Team Strategies *Dr. Ezekiel*	Trends, Current Events, and Exploring Jigsaw *Dr. McGinty*
11:55 a.m. to 12:00 p.m.	BREAK		
12:00 p.m. to 12:55 p.m.	**Cybersecurity Concepts with Coding Part I** *Mr. Stewart, Mrs. Gentile*	Red Team Strategies *Dr. Ezekiel*	Trends, Current Events, and Exploring Jigsaw *Dr. McGinty*
12:55 p.m. to 1:30 p.m.	LUNCH		
1:30 p.m. to 2:25 p.m.	**Cybersecurity Concepts with Coding Part II** *Mr. Stewart, Mrs. Gentile*	**Exploring Information Hiding (Steganography)** *Dr. Ezekiel*	Networking Ecosystem - Trusting and Authenticating *Dr. Wu*
2:25 p.m. to 2:30 p.m.	BREAK		
2:30 p.m. to 3:30 p.m.	**Cybersecurity Concepts with Coding Part II** *Mr. Stewart, Mrs. Gentile*	**Exploring Information Hiding (Steganography)** *Dr. Ezekiel*	Networking Ecosystem - Trusting and Authenticating *Dr. Wu*

CYBERSECURITY CAMP DAILY SCHEDULE

DAY 5 - AUGUST 6, 2021

Time	Middle School Students	High School Students	Teachers
9:00 a.m. to 9:55 a.m.	Cyber Knowledge Fair — *Mrs. Gentile, Dr. McGinty, Mr. Stewart*		
9:55 a.m. to 10:00 a.m.	BREAK		
10:00 a.m. to 10:55 a.m.	Cyber Knowledge Fair — *Mrs. Gentile, Dr. McGinty, Mr. Stewart*		
10:55 a.m. to 11:00 a.m.	BREAK		
11:00 a.m. to 12:30 p.m.	Competition - Virtual Escape Room — *Mrs. Gentile, Dr. McGinty, Mr. Stewart*		
12:30 p.m. to 1:20 p.m.	LUNCH		
1:20 p.m. to 2:25 p.m.	Competition - Virtual Escape Room — *Mrs. Gentile, Dr. McGinty, Mr. Stewart*		
2:25 p.m. to 2:30 p.m.	BREAK		
2:30 p.m. to 3:30 p.m.	Post-camp Survey/Certificates & Award — *Dr. Farag*		