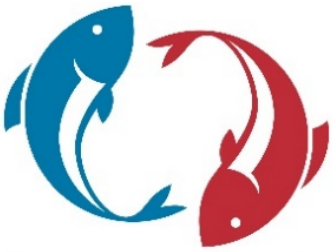
PNNL-30002



2nd Annual Academic Workshop

April 17, 2020

Contents

Overview

On April 17, 2020, the 2nd Annual Public Infrastructure Security Cyber Education System (PISCES) Curriculum Workshop convened program participants in a virtual forum to discuss current program operations. The workshop aimed to build momentum toward providing critical cybersecurity analysis to public sector organizations while developing a high-quality cybersecurity workforce, beginning in the Pacific Northwest and building outward in the future.

PISCES provides a data-sharing network to small communities in need of critical cybersecurity analysis. Students at qualified educational institutions studying cybersecurity analyze this data to provide live insights to communities about their network security. The Department of Homeland Security Cybersecurity and Infrastructure Security Agency (CISA) and the Pacific Northwest National Laboratory (PNNL) provide support in pursuit of PISCES' three principal objectives:

- Provide cybersecurity monitoring and analysis services for underserved public sector organizations,
- Develop a reliable pipeline of high-quality entry-level cyber professionals ready for the workforce, and
- Conduct research projects to improve event detection and incident management.

During the workshop, participants reviewed the PISCES effort and discussed opportunities for improvement. Key discussions focused on the needs for:

- Enhancing, standardizing, and sharing curriculum across universities;
- Conducting outreach to engage new partner universities and communities; and
- Building sustainability into the program model to sustain long-term funding, engagement, and impact.

This report summarizes the workshop discussions by presentation, including question and answer sessions. Looking forward, the PISCES teams will incorporate participants' feedback into their curriculum, partnering model, and operations.

Presentations and Discussions

Welcome and Introductions

By: Erik Fretheim, Cybersecurity Program Director, Western Washington University (WWU) & Mike Hamilton, Founder and Chief Information Security Officer, Critical Informatics (CI) Security

Erik Fretheim and Mike Hamilton acknowledged several partners and advocates who have supported PISCES, including:

- PISCES Board Members
- PNNL
- CISA
- U.S. Senator Patty Murray's Office
- U.S. Senator Maria Cantwell's Office

- U.S. Congressman Derek Kilmer's Office

Opening Remarks

By: Vinod Brahmapuram, Chief Information Security Office, State of Washington

Vinod Brahmapuram welcomed participants to the workshop, summarizing the focus and intent: to explore the program's current impact and operations and identify opportunities for continuous improvement. Brahmapuram cited the "Seven C's" put forth by Harvard Business School[1] as a meaningful framework from which PISCES can approach its curriculum and impact:

1. Calm – be patient, as launching an integrated, dynamic, and successful cybersecurity workforce development program takes time to build engagement.
2. Confidence – PISCES partners can be confident they bring unique expertise that will make this effort a success.
3. Communication – lines should be open between PISCES partners, universities, and jurisdictions.
4. Collaboration – building a workforce takes teamwork.
5. Compassion – PISCES is providing cybersecurity resources to jurisdictions that could otherwise not afford it.
6. Community – PISCES is building communities of practitioners.
7. Cash – building out a program requires sustainable capital and investments.

Brahmapuram added an eighth C: Creative ways to solve problems—PISCES presents an innovative approach to tackling the need for an experienced cybersecurity workforce.

PISCES Origin Story

By: Mike Hamilton, Founder and Chief Information Security Officer, CI Security

Mike Hamilton shared the PISCES history, framing the ever-evolving challenge that the program attempts to address: the need for a sustained cybersecurity workforce and regional information sharing. In fact, Hamilton shared an annex for 'significant cyber disruption' was written into the Washington State comprehensive emergency management plan.[2] Hamilton emphasized that local governments cannot compete for resources—competitors can offer quite a bit of money compared to government.

PISCES represents the reconstitution of the Public Regional Information Security Event Management (PRISEM) System[3], which spawned the notion of a shared regional cybersecurity monitoring approach. At the time, maritime ports were the most vulnerable to cybersecurity

[1] Quelch, John A. 2020. "7 Leadership Principles for Managing in the Time of Coronavirus." *Harvard Business School*. https://hbswk.hbs.edu/item/7-leadership-principles-for-managing-in-the-time-of-coronavirus
[2] https://mil.wa.gov/asset/5ba4217cc215e
[3] https://ocio.wa.gov/news/prisem

and PRISEM had successes blocking and investigating disruptions. The effort generated lessons learned applicable to PISCES:

- Working with state government and large universities can be challenging.
- Do not compete with private sector security providers.
- Fusion Centers are an effective way to share information.
- Public utilities are not a good match.

Hamilton outlined the PISCES organization, partnerships, and curriculum as well as the vision moving forward:

- Become a preferred source of cybersecurity analysts.
- Provide monitoring support for public employees in small jurisdictions.
- Maintain a rapidly deployable analytic stack.
- Conduct research projects and analytic enhancements to the stack, which are made available across the PISCES ecosystem.

PISCES Overview and Demonstration

By: Michael Tsikerdekis, Assistant Professor, Computer Science, WWU

Michael Tsikerdekis provided a technical overview and demonstration of the PISCES platform. Tsikerdekis shared technical details, such as examples in Python but many students have built their own scripts. Approximately 200 GB of data is used daily on a specific record, as distributed monitoring systems, net flows, and alerts are being monitored. He recommended that students learn to build these detections but more importantly they need to build something that explains what is happening and develop visualizations to tell a story about the data. The students also learn how to use a ticket system, which allows them to monitor and maintain details. Additionally, students who have taken the PISCES course typically have also taken a networks class, giving additional context for the work being performed.

Unlike many industry interactions, cities tend to respond and keep communication open about feedback and those responses are given to students. Monitoring occurs in cities but usually it takes time before a big incident is observed. The Washington Court System has been an example of an active "kill" and these were forwarded through the Fusion Center[4]. Tsikerdekis noted that cities want to know that they are being monitored. He suggested assigning a group of students to a certain city to give a report to the city and develop posters for suggestions on what those cities should be doing to improve. The goal is to communicate to people who might not have a security background and help them understand the impact of monitoring.

[4] http://www.wsfc.wa.gov/

Stakeholder Experiences and Lessons Learned

A series of program stakeholders shared their experiences, lessons learned, and best practices from their engagement with the program.

Mark Neufville, Lecturer, Spokane Falls Community College (SFCC), noted that it can take students time to hit their stride and once they get good at this task, the quarter ends. The continuity from quarter to quarter is a problem. Also, the bug-tracking system is relatively self-explanatory—it is Kibana, the visualization dashboard tool, that is challenging; students do not know here to start.

Deborah Wells, Lecturer, Information Technology and Administrative Management, Central Washington University (CWU), shared that several soft skills are available in the CWU's cybersecurity program and it integrates PISCES into the cybersecurity capstone. The program features limited emphasis on the grade component so students can work on the learning aspect. In particular student degree pursuits align to the security triangle, culminating in PISCES:

- Vulnerabilities,
- Attack and defense, and
- Forensics.

Wells raised the question of how to codify this, proposing to take risk and vulnerability management skills from previous classes and see how PISCES fits into the intrusion and management component of the curriculum. Wells suggested schools actively partner with PISCES to help address questions so as to not rely on one person (i.e., professor). Additionally, students should be encouraged to build on previous tickets instead of creating a brand-new ticket to enable continuity of knowledge and to see tickets through fruition.

Stakeholders Question and Answer

Following the general discussion with stakeholders, participants were invited to an open question and answer session, outlined below.

Are the tools consistent for all schools?

Tools used to date are standardized and there is a plan to create a Wiki to build out information to sustain knowledge as a quarter or semester ends. The program seeks to slowly integrate research projects and develop new tools for all the schools to use. WWU is developing the curriculum to share with other schools. The program hopes to package the curriculum in a way that many schools can adopt it for students with different skill sets.

Every school has different curriculum, but the schools talk weekly to create standardization. PISCES aims to communicate across the schools to acknowledge a new innovation such as detection techniques turned to analytics or time series analysis.

Is PISCES working with students on how to communicate to non-cyber professionals?

The PISCES course focuses students on analysis as opposed to the communication component. This idea may need to be rolled in at the end of the class. The element is not currently in the program.

How do you get university buy-in and is it possible with semesters?

University buy-in has not been a challenge but paperwork must be filled out.

PISCES likely operates better in a semester setting because of the way students learn. Continuity is guaranteed and all the findings and tickets are documented and archived for everyone to see.

Additionally, students who are interested may continue to work after the class ends but they need to be supervised. Those interested can form a PISCES club as another way to sustain involvement.

What is the process to register as a school to set up a course and partner with PISCES in training students and getting information security experience?

The PISCES team is determining which schools to add on, and which will run during each quarter. The program needs a certain number of cities to balance the number of schools so students have a productive experience. Based on the latter, program may need to shuffle around when courses are taught but all should reach out if they are interested. All schools need to sign a basic Memorandum of Understanding (MOU), which can be provided in advance.

Are any of the schools also customers of PISCES?

No schools are currently PISCES customers, but PISCES participants do attempt to monitor themselves.

Where do students go after PISCES?

PISCES is just beginning to try to track student placement in the workforce. We are aware that several students have been hired by CI. Our intention is to create a pipeline of students into the workforce.

How sustainable is interest in PISCES?

PISCES is currently funded by DHS-CISA although some volunteer efforts continue. PNNL is working on the sustainability strategy and value propositions to encourage private sector investment. As an example, a larger company could have a value proposition presented to them

that investing in PISCES is perhaps better than continuing to pay recruiters to find new cybersecurity talent. PISCES also needs to create greater signal for students to find interesting activities to stay motivated toward a career with government.

Universities see the value from the start but it is harder to get immediate buy-in from the cities and municipalities who may perceive it as another gimmick. The hope is private sector participation and PNNL's buy-in will generate more interest.

Are there statistics on job placement?

Because of the short time that the program has been offered, specific data is limited but notably stronger relationships are being built.

How long was the process of getting students to offer good impact through PISCES?

The easiest way to enable impact is to follow through with the alerts. Most students find something interesting with a new city within the first or second week, then slowly find fewer alerts of interest. Students are finding things in unorthodox ways as well, which is very interesting.

What are the program prerequisites?

Prerequisites include having basic understanding of networks, internet protocols, ports, etc. but also the basic requirements for general knowledge in computer science such as understanding false positives.

How do you expect to expand to other locations?

The program has talked with many other states but is focused on strengthening the program in Washington then expanding to Idaho. Afterward, there will be movement to have PISCES in other locations (discussed later this program). The program wants to develop a pipeline. To that end, it is positive to see how interested other people are in the program and want to actively get involved. South Carolina, for example, mentioned bringing in students from the Citadel and one of the local Historically Black Colleges and Universities (HBCUs). This could generate the potential for many HBCUs to adopt the program.

Student Feedback

Students from WWU and CWU provided feedback about their experience thus far in the program. Students cited an initial learning curve when starting the program but reported having had a good experience and would recommend PISCES.

Regarding post-program employment, one student shared placing PISCES on their résumé enabled them to gain a 2-hour interview the morning of this event. Another student indicated

they were not sure how prepared they feel doing this regularly (i.e., at a security operations center [SOC]) but they felt more prepared than otherwise and understand now what it means to be a SOC analyst. The student noted this experience showed that a stock analyst position felt more feasible as a career option after this program.

To enhance the curriculum, students noted it would be helpful to have policy-based classes and classes that help students write professionally in order to make writing tickets a little easier and make operations flow better. Students also noted it was valuable to have soft skills, in particular suggesting computer science students probably should take a networks class beforehand. It could be helpful to take the PISCES course closer to the halfway point in an academic program to help better guide career/course choices. Students noted would be nice to have a Wiki or a how-to document on how to narrow down the search from the beginning, perhaps videos or examples. In general, better documentation or instructions would be helpful for learning how to conduct searches.

In a discussion about PISCES clubs, a student explained the current club is open to juniors. There seems to be a barrier to students who do not have experience and just want to know more. A PISCES club could be open to lower class students who show interest even though they have not taken the course.

Curriculum

By: Michael Tsikerdekis, Assistant Professor, Computer Science, WWU

Tsikerdekis provided an overview of the PISCES curriculum, including:

- Prerequisites - Tsikerdekis reviewed valuable fundamentals that may aid students entering the program, including applied proximity, Unix administration, networks, and programming familiarity. Some are university requirements and some are from the professor. Tsikerdekis noted the false positive rate is something that can be estimated using probability so that is why such a course may also be required.
- Course outcomes - Tsikerdekis encourage that students should work with packet captures because this is something that will likely be performed in their real jobs. Additionally, students may connect to the city individually, which can have a positive impact, thought the program acknowledge the drawbacks.
- Required reading - Books are optional but not necessarily good for ELK or perhaps are outdated; generally, they provide more of a background.
- Grading and instructional approach - Tsikerdekis emphasized that PISCES activities need a grading component: Monitor, analyze, investigate, collaborate, escalate. Escalate is the most important for showing the value to the cities and municipalities. Unless a grade is assigned to this task, the students do not participate. Students need to open and engage with tickets.
- Operations (deliverables, assignments, activities) – The program estimates approximately 30 hours of contact teaching, regardless if it is lecture or active learning

such as projects. Projects often help to engage students and they can compare and contrast with each other. The following was suggested as an example project: Develop a spreadsheet to capture flows with the start and end dates and students have to report on what they find interesting in that file.

- Curriculum - Suricata[5], Zeek[6], and Pcap files are all used in the curriculum. Additionally, there is a strong emphasis on developing signatures for industry and industry-based or related assignments.
- Visualizations/Dashboards - Visualizations are important but also so that the data and visualizations can be read and interpreted across many platforms (e.g., STIX2). Students should be able to articulate why they chose to visualize the way that they did and, in particular, participate in discussion surrounding pie charts.
- Future directions - The curriculum is not stationary and has room for development and adaptation. Additionally, tiered certification may aid understanding of the enterprise, technical, etc. components relative to student skills.

Tsikerdekis noted that ticket analysis was performed to see what tickets were high, medium, and low alert. Students have worked on more than 450 tickets to date. Example high-alert tickets have been through Bitcoin mining—a student discovered high levels of NTV traffic.

Tsikerdekis closed by sharing outstanding items the program will look forward to addressing, including:

- Escalation operations (i.e., could the program develop a PISCES SOC?)
- Platforms (i.e., SNORT vs SURICATA)
- Competences versus technical capability
- Staffing (i.e., lacking security experts with real-world expertise to advise the students)

National Initiative for Cybersecurity Education

By: Russ Goychayev, Research Analyst, PNNL

Russ Goychayev shared a summary of the National Institute of Standards and Technology (NIST) National Initiative for Cybersecurity Education (NICE)[7]. NICE features seven categories, 33 distinct specialty areas, 52 distinct work roles, and 1,084 distinct Knowledge, Skills, and Abilities.

Professors at their own schools can map to the top work roles to customize their course. As an exercise, Goychayev mapped WWU PISCES's curriculum and the top 10 work roles included:

- Network Operations Specialist
- Threat/Warning Analyst
- Cyber Defense Incident Responder

[5] https://suricata-ids.org/
[6] https://zeek.org/
[7] https://www.nist.gov/itl/applied-cybersecurity/nice

- Cyber Defense Infrastructure Support Specialist
- All-source analyst
- Mission Assessment Specialist
- Technical Support Specialist
- Cyber Defense Analyst
- Target Developer
- Exploitation Analyst

The NIST NICE mapping analysis can evolve based on different focal points universities wants to emphasize.

Representatives from the universities in attendance shared their current turnout:

- WWU averages 20-25 students (max class size of 35) for enrollment. The past quarter was about 30 students. WWU primarily uses team-based work. Teams will monitor a particular city but sometimes have overlap. The report is produced by a team. The STIX2 is by a team. Programming assignments are done in pairs.
- SFCC averages 20 students per class, one during the day and one at night, depending on the number of students in the program. SFCC started with groups of four and then separated into teams of two, which seemed to work more effectively for data analysis.
- CWU features two sections, total approximately 60 students. CWU was not heavily impacted by a work-from-home situation, as they were already set up for online collaboration.
- St. Martins has not started yet so does not have enough information on enrollment, but they average 13 students per classes and their computer science is smaller so usually 8-20.

Given the pandemic, participants further discussed the perspective of working from home, noting that working from home may be more computer secure because there are fewer people who would be seeing what they are working on as opposed to many people going in and out of the laboratory. Notably, the students are seniors so they are fully aware of the security protections and precautions.

PISCES Club

By: Erik Fretheim, Cybersecurity Program Director, WWU

Fretheim discussed the prospect of PISCES clubs for students who are interested in participating but not currently enrolled in the course. For continuity, when and who is available during holiday, summer, and after hours can be an issue—the club allows for students to continue with the work during these times. However, Fretheim noted, the club should be careful not to overshadow the work of the students current enrolled in the course.

Clubs require coordination in use of the ticket system and consistency of escalation to reduce duplication of effort (i.e., students working on the same ticket). Also, communication methods are needed that sustain operations while not increasing the load on faculty. WWU established a

Slack channel for its internal users but a global channel will be needed to keep track of everyone participating.

Fretheim raised the question of how to bring new students in the club and get brought up to speed on what is happening without having yet taken the course. Students can take the course and be more prepared and can potentially pair students who were in the club with students who have not taken courses to make everyone more capable. There is more demand right now for the students to take the course than there is availability so the club could be a valuable resource.

Fretheim emphasized that a club needs a central coordinator and PISCES needs resources and a mechanism to get that in place. Instructors have taken on the burden but moving forward someone needs to take this on in a more formal basis. The coordinator needs to be aware of processes and learning processes—this could be a mature graduate student, for example.

Cyber Range Poulsbo Update

By: Vipul Kumar, Cyber Range Master, WWU

Vipul Kumar provided an overview of the Cyber Range Poulsbo, including an introduction to the team and the university, government, community, and private industry partnerships, listed in Table 1.

Table 1. Cyber Range Poulsbo Partners

University	Government	Community	Private Industry
• Boise University • CWU • St. Martins • Peninsula College • Olympic College • Green River College • Whatcom Community College • Edmonds Community College • Lake Washington Technical College • Bellingham Technical College	• Naval IX Tech Bridges -Keyport WA • U.S. Department of Energy National Laboratory (Competitions, Events, PISCES Project)	• Kitsap economic development alliance • Cybersecurity summer camp • Hackathons • Tech talks • Cyber cafes (K12) • Teacher/student training • Cyber Range - tech advisory and hub for local innovators	• Boeing • CI • Microsoft Azure • Digitalocean Cloud

Kumar shared the range's mission, master plan, infrastructure, exercise catalog, datacenter, training programs, and current deployment, followed by alive demonstration of the platform.

Regional Update / Next Steps

By: Steve Stein, PISCES

Steve Stein shared the regional perspective and path forward for PISCES, emphasizing:

- Keep it simple.
- Keep costs low.
- Keep the focus on the students.
- Keep the quality for the communities high.

He noted that PISCES has many great ideas and directions to head but needs to be careful with its resources and capacity—rein back the enthusiasm without losing enthusiasm. The program is currently working with approximately 10 communities and needs to get to 35. To date, it has been easier to recruit academic institutions as opposed to attracting communities.

Stein noted that expanding to Idaho will allow the program to compare costs, benefits, and complexity and to better understand appropriate strategies for infrastructure. Some might be better suited for the cloud environment than others. Additionally, reaching out to Alabama HBCU can help connect to minority communities at a larger scale.

Stein shared that the program has considered both franchises and regionalizing as opportunities to move forward. Additionally, there will be a strong interest in collaboration moving forward. Currently, the program is limited to municipalities with 150 employees or fewer as PISCES does not want to compete with commercial monitoring. The program is willing to make exception to larger municipalities on a stopgap 1-year contract while the municipality explores the program and can hopefully gain enough internal support for a commercial service.

Closing

By: Erik Fretheim, Cybersecurity Program Director, WWU

Fretheim provided a brief recap of the day's discussions, opportunities, actions, and next steps. The workshop presentations and video will be shared with participants. The program team will convene to evaluate feedback from the workshop to continue to enhance the program's structure, outreach, and approach moving forward.

Appendix A – Agenda

PISCES NW

Academic Workshop

April 17, 2020

TIME	TOPIC	PRESENTER
10:00 – 10:30	Welcome and Introductions	Erik Fretheim Mike Hamilton
10:30 – 11:00	PISCES Overview and Demonstration	Michael Tsikerdekis
11:00 – 12:00	Stakeholder Experiences & Lessons Learned ▪ Spokane Falls Community College ▪ Central Washington University ▪ Western Washington University ▪ Critical Informatics ▪ Community Partners	
12:00 – 1:00	LUNCH BREAK	
1:00 – 1:15	Student Feedback	Students from Central Washington University and Western Washington University
1:15 – 2:15	Curriculum ▪ NIST/NICE Framework	Michael Tsikerdekis Russ Goychayev
2:15 – 2:30	PISCES Club	Erik Fretheim
2:30 – 2:50	Cyber Range Poulsbo Update	Vipul Kumar
2:50 – 3:05	Regional Update / Next Steps	Steve Stein
3:05 – 3:20	Round Robin / General Q&A	Erik Fretheim
3:20 – 3:30	Closing Remarks & Adjourn	Erik Fretheim

Appendix B – Participant Questions

Mike Hamilton - Can you (Michael T) confirm that working through the Fusion Center that student reporting has been able to claim a couple of kills? – Washington Court System

From Toni Benson (CISA) to Everyone: 11:00 AM
Is there are requirement for the students to also present findings or writing reports on them? I find employees tend to great at finding the anomalies but aren't able to articulate it or describe the impact/risk to their leadership.

From Toni Benson (CISA) to Everyone: 11:18 AM
Are the tools used for additional analysis consistent across all of the schools? Is there curriculum around how to utilize those tools?

How we are consistently building that across all of the curriculum but yes it answered my question

From Dave Thurman to Everyone: 11:21 AM
Following on to Toni's earlier question, what curriculum exists around how to convey cyber risks in a larger context. i.e., how to talk to non-cyber professionals about the business impacts associated with cyber risks.

To the faculty who have curriculum - how do they incorporate it into the larger PISCES?

From Teresa to Everyone: 11:21 AM
Did you have any problems getting buy-in from your college? Who did you have help you set this up? Or where you on your own? We are on a semester (16) weeks...I assume that would be better?

How do you handle student turnover? Club? Year-round guarantee for cities that it will be monitored year-round.

From Alfred Acquaye to Me: (Privately) 11:25 AM
What is the process to register as a school to setup a course and partner with PISCES in training students and getting Information Security experience with you guys?

From Stu Steiner to Everyone: 11:38 AM
Is it possible to see the MOU ahead of time so I can ensure my college is on board?

From Dave Thurman to Everyone: 11:39 AM
Are any of the schools also customers of PISCES?

From Alfred Acquaye to Everyone: 11:39 AM
Could we get Erik and Steve contact info?

From Toni Benson (CISA) to Everyone: 11:46 AM
Do we have statistics on job placement after going through PISCES?

From Alfred Acquaye to Everyone: 11:48 AM
How long was the process of getting students ready to offer good impact through PISCES? Is there a pre-requisite for students?

From Greg Bastien to Everyone: 11:52 AM
At the beginning of the workshop the following locations were mentioned: Washington, Alabama, Oregon, Idaho, and BC. How much do you expect to expand this program?

From Mark Wright to Everyone: 12:00 PM
Steve, can you talk to the cities currently in the program and those you are working with in WA?

From Ann Lesperance to Everyone: 01:06 PM
I am curious what these students want to do after they graduate?

From Michael Hamilton to Everyone: 01:06 PM
How prepared do you feel to work in a SOC?

From Diane Sanchez to Everyone: 01:06 PM
Did this experience influence your interest in a career as an analyst? what could be done to interest you further?

From Diane Sanchez to Everyone: 01:08 PM
You are both seniors…would this experience/course be more impactful to your career earlier in your college years? How did you other courses prepare you for PISCES?

From Dan Wordell - City of Spokane to Everyone: 01:10 PM
Josh, would you recommend other students take a network course before taking a PISCES course?

From Teresa to Everyone: 01:11 PM
Do you feel having a board knowledge in IT helpful, example - Cisco, CompTIA, MS, Linux?

From Diane Sanchez to Everyone: 01:12 PM
What would you recommend we do to enhance this course and your experience?

From Stu Steiner to Everyone: 01:19 PM
Is there a formal book you use for the course?

From DC Grant to Everyone: 02:04 PM

Approximately how many students are enrolled in each of your courses? (average)

From Ann Lesperance to Everyone: 02:07 PM
Great presentation Russ. I am curious if we have seen any trends in the top work roles over time....or do we anticipate any change in work roles. Maybe for Mike H?

From DC Grant to Everyone: 02:07 PM
Thanks. Do the students work any aspects in teams - or are the assignments mostly individual?

From Teresa to Everyone: 02:10 PM
How had/have the stay at home affect your teaching? Can you still finish the labs/PISCES?

From Stu Steiner to Everyone: 02:23 PM
Does PISCES have to be taught as a course every quarter or can it be taught once a year and the students then move to the club?

From Steve Stein to Everyone: 02:25 PM
What kind of resources do you need

From Stu Steiner to Everyone: 02:26 PM
I like the idea of starting with the club for schools like Eastern Washington University who aren't quite ready for the class. Can a grad student be that coordinator?

From Teresa to Everyone: 02:26 PM
What is the name of the Slack channel?

From Teresa to Everyone: 03:02 PM
Will I be able to share this?

From Stu Steiner to Everyone: 03:03 PM
I'm ready to sign up for a course winter/spring 2021 —> how do I do that?

From Matt Boehnke to Everyone: 03:03 PM
Yes, do you have a planning document to present and discuss with decision makers?

From Stu Steiner to Everyone: 03:04 PM
I have a friend who is mayor of Coulee City or something like that I've talked to him about PISCES and he is interested.

From Diane Sanchez to Everyone: 03:05 PM
Steve..thoughts on how you plan to expand this into other states? Franchises? Is the Department of Homeland Security receptive to fund this into other states? Strategically, what is the best approach to avoid duplication? Case in point…Cyber Range Strategy?

From Stu Steiner to Everyone: 03:05 PM
I might have missed it but what is the requirement for a municipality?

From Diane Sanchez to Everyone: 03:09 PM
What opportunities to up sell solutions for these municipalities that might offset the costs of operating PISCES that aligns with the Private Sector. Public/Private Sector initiatives….

From Stu Steiner to Everyone: 03:13 PM
Can we post the link to the recording somewhere or include it in the email with the contact info and MOU please.