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**DEVELOPMENT OF A METHODOLOGICAL
FRAMEWORK OF CYBERSECURITY INTERNSHIP
PROGRAM FOR SMEs**

**Erasmus Plus, Strategic Partnership in Adult Education, KA210, funded
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Coordinator

Learning and Innovation Academy of Finland Oy, Helsinki, www.liaf.fi

The Partners

Educational Innovation and Development Academy Oü, Estonia www.eqo4all.com

Special Education Academy, Turkey www.specialedacademy.net

ABSTRACT

This intellectual property demonstrates the collaborative work of the project partners under Erasmus Plus fund supported by the Finnish National Agency for Education and European Commission about the above listed project name and number. This intellectual property outlines a comprehensive methodological framework of cybersecurity internship program for Small and Medium Sized (SME) organizations, which can also be used by bigger institutes. This output consists of various internship components with their descriptions and relative examples and ready to use materials, which would assist SMEs to create their own internships in any IT field (specifically in cybersecurity) in any short or long term formats based on specific SME preferences.

Legal warning

The European Commission support for the production of this publication does not constitute endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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Contact Information:

Learning and Innovation Academy of Finland Oy, Helsinki, liafmanager@gmail.com or yorkin1980@yahoo.com

The Contributors

Dr. Adnan Özsoy

Dr. Eyüp Bayram Güzel

Dr. Obaidur Rahaman

Mr. Yorkin Kosimov

Dr. Ömer Faruk Ögütçen

Dr. Farid Saparov

Mr. Ömer Jiraki

Mr. Erdal Güzel

Dr. Diptangshu Pandit

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A. Project Summary and Objectives

CYBERSME is an Erasmus Plus strategic partnership project in adult field, supported by Finnish National Agency for Education. This project presents a collaborative work of project partners with the aim of developing a methodological framework of cybersecurity internship program for Small and Medium Sized (SME) organizations which can also be used by bigger institutes. All of the developed materials have been tested in an actual cybersecurity company (medium sized SME) as a work-based implementation in collaboration between cybersecurity interns and experts, modified based on their mutual feedback, redesigned as aligned with the actual needs of the SMEs' and interns' and then published as a final outcome.

By using our internship components with their descriptions, relative examples and ready to use materials, SMEs can create their own internships in cybersecurity and in any IT field, in desired short or long term formats based on SMEs' specific internship needs and preferences, according to certain rules and standardized approaches reflecting actual requirements of cybersecurity positions with a common taxonomy, structure and relevant content. This in return is likely to support adults' internship opportunities at SMEs in cybersecurity field within various internship programs, would enable SMEs, adult educators, adults and other targets to address their individual needs in a unified approach by analyzing and demonstrating each target's individual needs, as what they expect from an internship program addressing adult's learning and career needs, SMEs' market needs and so on.

All of the created materials are free to use without any financial requirements.

Introduction

Internship means a structured, planned, monitored and supervised learning experience in a professional setting that allows interns to gain valuable work experience in an intern's chosen field of study or career interest.

Internships are usually considered as the first steps in the process of achieving 'real world' experience, encounters and environments for interns. Therefore, this process should be well structured and implemented to not miss such a valuable experience. Concerning cybersecurity field, since it is a relatively younger field of study compared to the other IT areas, cybersecurity internships are not very common type of positions offered in the corporate industry due to its requirement of skill specialties, a risk of breaching company confidentiality, and the specific requirements needed when being a security intern. In addition to the scarcity of cybersecurity internships offered overall, the competition is intense with individuals competing against talented, skilled and advanced people all around the EU and World [3, 11]

Based on the fact that the number of cybersecurity internships are few and the shortage of skilled cybersecurity workforce in the EU and Worldwide, the need for more cybersecurity internships become urgent/imperative to fill the workforce gap along with fulfilling the security operations/needs of the companies (ref). Currently, there are around 3 million cybersecurity workforce needed around the World (ref) among them nearly 1.2 million are needed in the EU [5,11].



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What is the benefit of internships for the SMEs?

The concerns about cybersecurity internships evolve around the questions such as why would a company (mostly SMEs since 97% of the companies are SMEs in the EU) use resources, time, employees, funds and undergo the recruitment process all for a ‘‘cybersecurity’’ intern, who will have little applicable experience, knowledge, skill and awareness of the cyber industry? The interns may have been told to get an internship to demonstrate and provide a formidable means of experience, but the interns should wonder why internships (especially a position as sensitive as cybersecurity) is offered to interns (most likely students or new graduates)

Internships are offered primarily to interns who are currently students, new graduates or adults for:

Enhancing Company Reputation: Although hiring an intern may pose risk to a company, allowing for interns to join a corporate environment will enhance the ‘‘overall’’ reputation of a SME company. Being inclusive and active within the academic setting allows a SME to demonstrate their willingness to invest in the younger generations while enhancing their overall consumer perception of what a company stands for [8].

Recruitment: Internships are primarily offered to help a company in order to recruit potential talents. Especially for fields like cybersecurity, discovering and identifying potential skilled talent is important where internships are great programs to attract such talent. On the other side, internships help the interns to not waste time for searching, applying and undergoing an internship-like positions, rather they can work on sharpening specific technical skills, which would place them in good job positions in IT sectors [6].

For the interns, the value offered in cybersecurity internships would be:

Real-World Application/Experience: Perhaps the most apparent reason for applying to internship opportunities is to gain formidable, hands-on, practical and actual work experience. Internships allow for the possibility to connect what you learn academically to real-world encounters, problems, and solutions. Attaining real-world experience is important/vital for interns who are trying to apply their technical skills [10].

The Dynamic of Communication: An often overlooked piece when it comes to I.T. fields like cybersecurity is communication. Are you able to communicate, work with a team of people, express your value in attainable methods like proper verbal and written skills? Technical skills can be learned throughout the course of time, but developing proper communication skills also called ‘‘soft skills’’ is immensely important for employers. Developing, improving, and displaying your communication skills via an internship will benefit you when you begin to apply for positions in the cybersecurity industry [2].

Understand the Different Type of Positions in Cybersecurity: When you are an entry-level cybersecurity employee, sharpening on specific types of skills can be easily done through additional training/qualifications. However, if you launch into an ‘‘expert-like’’ cyber position at the start of your career, you will have to backtrack from a ‘‘niche’’ to a general cyber position. As a cybersecurity intern, you will be able to distinguish what kind of cyber positions suit you best before investing in additional training and funding. Participating in multiple different type of positions before entering a full-time position can be beneficial to you as an entry-level worker.

B. A METHODOLOGICAL FRAMEWORK OF CYBERSECURITY INTERNSHIP PROGRAM FOR SMEs

We created a comprehensive methodological framework of cybersecurity internship program, which has various components as what a professional internship program must have, based on scientific research and IT/cybersecurity sector specific reports/studies.

The framework works in a way that it covers all the necessary components of an internship program from beginning to the end, where SMEs (or any organisation) can basically fill the **ORANGE BLOCK (empty blocks)** for each section, based on its own internship subject. To fill the orange blocks, SMEs were guided by the information that we have provided under **BLUE BLOCKS** as description, examples/hints. So that, SMEs would understand what each section stands for, what are the real case examples/hints to fill the sections and more.

In some of the sections, we have created ready to use materials as tables, questionnaires and items (for example intern evaluation form, company supervisor evaluation form and others), which can be directly used by SMEs to deal with documentation purposes, for evaluation and recommendation purposes and for any other goals. So that, SMEs would have premaid documentations to properly start the internship process, monitor it, assess/evaluate and finalize the internship processes in professional formats.

Importantly, we have created the below internship evaluation forms in a way that the interns and internship supervisors/mentors/managers can **rate** the overall and specific internship progresses and achievements, which can be later used as a quantitative data, that is data that can be counted or measured in numerical values. So that the companies can use the collected data to numerically analyse the interns' achievements, their companies' overall performance, specific achievements, subjects they lack skills and more. These data will help the companies to create the best internships possible over time by enabling them to collect various data, understand their meaning (low value or high value areas) and accordingly modify their internship programs to create best possible future internships.

Also, there are questions parts to be completed with written answers, which can be used as qualitative data, which is non-numerical data that the companies can use it to interpret how the interns and host companies perceived the internship, the intern's attitudes, characteristics and personalities along with the host company's qualities, characteristics and more. This data will help the companies to receive data in depth as more personalized and specified, which can be used to create more advanced/improved internships in the future.

INTERNSHIP/COURSE NAME

Description: Write the name of the internship and course

Please write your SME's internship/course name here

EXAMPLES & HINTS (You can choose examples from the below list and add your own information and preferences)



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There are around 83 officially recognized internship courses about cybersecurity such as:

- Cybersecurity Introduction
- Network Security
- Ethical Hacking
- Advanced Computer Networks
- System Administration and list goes on.

INTERNSHIP DESCRIPTION

Description: Write the overall description of the internship which should cover/state the rationale for the course and state an overview of the key content covered.

Please write your SME's the internship description here

EXAMPLES & HINTS (You can use/modify examples from the below list, add your own information and preferences to create this section based on your own internship subject)

Rationale: This internship course (ex. Ethical Hacking Essentials (EHE)) will provide the interns an opportunity to explore, learn, build and demonstrate their learning in a work-based actual learning environment.

Overview of the key content: This internship is about general introduction of ethical hacking essentials, which covers fundamentals of information security and ethical hacking, information security threats and vulnerabilities, types of malwares and vulnerability assessments, network-level attacks including sniffing, denial-of-service, session hijacking and their countermeasures, application level attacks including webserver exploitation, OWASP top 10 attacks, SQL injection and their countermeasures.

INTERNSHIP LEARNING OBJECTIVES

Description: Explain what the interns will learn at the conclusion of the internship which are specific, measurable objectives and competencies which you would assess in order to decide whether your goals (learning objectives) are achieved or not.

Please write your SME's internship learning objectives here

EXAMPLES & HINTS (You can use/modify examples from the below list, add your own information and preferences to create this section based on your own internship subject)

Example 1: In this internship, you will learn about the essential building blocks and basic concepts around cybersecurity such as Confidentiality, Integrity, Availability, Security Architecture, Security Policies, and so on. In addition to these concepts, you will also explore the core topics such as Security Governance, Audit, Compliance and Security Architecture.

Example 2: In this cybersecurity internship, you will learn a variety of security tasks that one should expect a junior or entry-level security analyst to perform. These include reimaging machines that have been previously compromised, SIEM (Security Information and Event Management) tool usage, virus/malware remediation, and general tasks of the security operations center (SOC). In addition, each semester an intern will be required to complete one special security-focused project that will serve as a more detailed look into one specific security need.

Example 3: As a software tester intern, you will learn how to utilize the latest security software, testing its implementation to develop solutions. You will also test existing software to ensure functionality, with great scope for growth and security.

DURATION

Description: Internships vary in length based on the type of company, industry and employer. There is no one-size-fits-all answer, rather SMEs should decide on the duration of the internship depending on the desired outcome from the internship and how long it will take to meet the exact goal, also SMEs' resources, professional goals and specific needs. SMEs must clearly state the start date, how many weeks the internship runs, and exact dates, state the days the intern will be working (whether the internship is online or face-to-face)

Please write your SME's internship duration details here

Example 1 (a short term internship):

Duration: 4 weeks

Starts at 1st of May, 2023 and Ends at 31st of May 2023.

The days the intern will be working: First 3 days of each week, which are;

*1-2-3 of May, *8-9-10 of May, *15-16-17 of May, *22-23-24 of May and 29-30-31 of May, 2023

The internship exactly ends at 31st of May, 2023.

Example 2 (a long term internship)

Duration: 6 months

Starts at 2nd of January 2023 and Ends at 30th of Jun, 2023



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The days the intern will be working: Based on company's operational hours which starts at 9 am until 4 pm everyday, 5 days a week and off in the weekends. Also, off on national holidays.

Example 3 An online internship

Duration: 50 hours as a self-paced online course format

Starts at 7th of August 2023 and ends after 50 hours of online internship courses completed successfully. They must be completed in maximum 3 months (SMEs should specify an ending date to make sure the interns know the exact ending time)

FEE/PAYMENT

Description: Fee of the internship must be clearly stated whether it is paid or unpaid along with their financial components, including the salary or stipend with exact payment as pay per hour, pay per week or pay per month.

PAID

A paid internship is one in which the intern is compensated for his/her work typically with a salary or hourly wage

UNPAID INTERNSHIPS

The interns do not receive monetary compensation for their work.

OTHER FINANCIAL SUPPORTS AVAILABLE

SMEs sometimes can offer financial supports to cover some of the work of the interns but do not categorize such support under Paid/Unpaid internship category. In this case, state the financial support available with detailed info including in which formats, when, how etc.

Please write your SME's internship fee/payment details here

Example: for PAID internship:

The intern receives 11.82 euro hourly salary during the internship.

The intern receives 244 euro weekly salary during the internship.

The intern receives 972 euro monthly salary during the internship.

Example: for other financial support available

The intern's transportation cost will be reimbursed which includes transportation to the office and company work

The intern will be provided free lunch during the office work,



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The intern will be paid based on project-based work if assigned by the internship provider, under freelance contractor terms and will receive the same amount of hourly wage as the freelance contractors receive at the company.

Paid time off subject to eligibility, including paid parental leave, vacation, sick, and bereavement.

Preferred Knowledge-Skills-Abilities

Description: Knowledge, Skills and Abilities (KSAs) are a list of special qualifications and personal attributes that the interns need to have for a particular internship position that the employers wants to find in the person selected to fill such internship position (www.nist.gov).

Knowledge The factual or procedural information that you need to perform a Task. Knowledge is gained through training, research, and hands-on experience.

Skills The result of applying your knowledge to perform a Task. Skills are developed and refined with practice and training.

Abilities The potential or capability to perform Tasks.

Please write your SME's preferred knowledge-skills-abilities details here

Example 1: Information Technology Internship's required KSAs

- Knowledge of customer support principles and IT security principles.
- Knowledge of troubleshooting methods, communication methods, and techniques to assist in implementing and maintaining network and system services.
- Knowledge of methods for evaluating, implementing, and disseminating IT security tools and procedures to develop, implement, and coordinate activities designed to ensure, protect, and restore IT systems, services, and capabilities. availability of applications and develop solutions to complex operational problems.
- Skill in applying network systems design, development, testing, installation, and operations to provide network services that support business requirements.
- Ability to support or manage system resources including performance, capacity, availability, service ability and recoverability to ensure the delivery of IT services. (www.nist.gov)

Example 2: Information Security Internship's required KSAs



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- **Basic understanding of Cybersecurity Concepts:** Familiarity with various cybersecurity concepts such as threat modeling, risk assessment, incident response, threat intelligence, vulnerability management, and digital forensics.
- **Knowledge of Incident Response and Detection:** Understand incident response process and detection techniques including incident identification, containment, eradication, recovery, and lessons learned.
- **Administer Security Tools:** Knowledge of security tools like SIEMs, firewalls, intrusion detection/prevention systems, vulnerability scanning tools, endpoint protection software, and threat intelligence platforms.
- **Data Analysis:** Process large volumes of data to find both anomalies and patterns
- **Governance & Compliance:** Review systems and applications for compliance to security requirements and educate end users on security best practices

Preferred Formal Qualifications

SMEs look for interns who possess some sorts of formal qualifications which are appropriate for specific internship positions. Formal qualifications range from an undergraduate college degree to specific I.T Certifications. Please **define** your SME's preferred formal qualifications.

Please write your SME's preferred formal qualifications details here

Examples:

- Bachelors' degree in Computer Science, Informatics, Data Analytics, Accounting, Actuary, or related area
- Bachelors' degree in Computer/Network Engineering, MIS, Mathematics or a related technical discipline
- Engineering degree in Electronics or Computer Science or related field.
- A Cyber/Information Security related degree and/or relevant cyber security qualification(s)

Some of the SMEs look for more specific degrees (bachelors', Masters or certifications etc.) such as;

- Cyber security.
- Computer science.
- Forensic computing.
- Network engineering.
- Networks and security.
- Mathematics, physics or other STEM subjects etc.

Preferred Technical Skills

SME employers understand that a cybersecurity intern will not be a cyber expert, however, an intern must display his or her minimum technical skills suitable for the position so they can complete



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projects and tasks throughout the internship. These required technical skills differ for specific internship subjects. Please **define** your preferred technical skills for your internship.

Please write your SME's preferred technical skills details here

Examples of Technical Skills

- Python, Bash, C++, PowerShell
- Network protocols, Operating Systems, and Cloud Platforms
- Data Analysis skills including data querying languages like SQL or Elasticsearch Query DSL
- Experience in data analytics, operational auditing, and project management using ACL, Visual Basic, SQL, Alteryx, UIPath, Tableau, Python or other advanced analytics tool
- Strong interpersonal skills, strong verbal and written communication skills, attention to details, self-motivated with a sense of urgency.
- Other certifications such as ACL Certified Data Analyst (ACDA), CPA, CFE, CISA, CIA or others a plus.
- Experience programming in C, C++, or Java
- CISSP
- Certified Ethical Hacker (CEH)
- GIAC Security Essentials Certification (GSEC)
- Systems Security Certified Practitioner (SSCP)
- CompTIA Advanced Security Practitioner (CASP+)
- GIAC Certified Incident Handler (GCIH)
- Offensive Security Certified Professional (OSCP)
- Basic knowledge of SQL, Visio, Figma, MS Project and JIRA
- Experience working with server clusters consisting of 100s-1000s of machines, and deploying changing with zero downtime,
- UNIX and Linux system administration experience: SSH, monitoring processes, attaching storage, cleaning disk space, tailing logs, etc.,
- Experience with implementing Continuous Integration and Delivery processes in large engineering teams,
- Experience in a DevOps role supporting highly available production applications and flair for building/exploring tools,
- Working knowledge of containerization (Docker) and supporting technologies,
- Knowledge of virtualization technologies like VMWare ESXi, Vagrant, KVM,
- Knowledge of web servers and load balancers Apache HTTP Server, Apache Tomcat, WildFly, Apache Traffic Server, Nginx, HAProxy and Ansible.



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ELIGIBILITY REQUIREMENTS

Some of SMEs recruit/accept internship applications from outside of its located country, in that case, there are country specific rules and regulations to apply including citizenship, visa, work permit and insurance etc. To clarify this issue, SMEs should define their internship eligibility requirements for the interns. Please **define** your eligibility requirements.

Please write your SME's eligibility requirements details here

Examples:

- Interns must be a **EU citizen, British Citizen, Finnish citizen etc.**
- Interns must have EU work permit.
- Be at least 16 years old when accepted into the program, enrolled in high school or an accredited two or four year college, or graduate school with coursework in a cybersecurity/information technology, or cybersecurity/information technology support area
- Have at least a 2.0 GPA or have a cumulative of 2.5 GPA or above,
- Demonstrate strong oral and written communications skills in English, Finnish, German, Italian etc. (define whichever language is your SME's preference)
- Be fluent in English (mandatory); knowledge of Finnish/German etc language is an advantage
- Be at least 18 years old and not older than 45.
- No need for visa (some SMEs may prefer having interns without visa process)
- Accept international application and support available for visa applications.

Application Period

SMEs should clearly define the application period with a starting and ending date. There are cases where some of the SMEs do not state a deadline, rather states the application period will end after enough number of applications received. Even in this case, this uncertainty should be clarified with an exact information and ideal time.

Please write your SME's application period details here

Examples:

- Applications will be accepted between 1st of May until 31st of Jun 2023.
- Applications will be accepted as posted on our SME's webpage with a deadline no more than 2 months.
- Applications will begin on 15th of August 2023 until the internship position is filled, ideally with a deadline of 15th of October2023.

How to apply

SMEs should state necessary information about how the interns can apply, whether it is via email, letter, online form submission, document uploading or any type where all the application tools and materials should be clearly stated (no broken links, vague/unclear statements etc.) Please **state** your SME's info in this respect.

Please write your SME's how to apply details here

Examples:

- Please send your internship request form (here is the request form link to download) to the email address xyz(at)gmail.com
- After downloading the internship form at (state your SME's link), please sign and submit the form to our platform at (state the link to upload the form)
- Please send an email with your letter of internship intention and your CV to the email (state your SME's responsible email)
- Please contact with our HR unit from the phone number (xyz) and schedule an online meeting to discuss the details

Who to contact

SMEs should define a particular person in charge of internships if the interns need an extra support or information. Please also see our internship supervisor section for more information.

Examples

- Please send your inquiry to the email address xyz[at]gmail.com
- Please call the phone number (+56123.....) if you need further assistance

For some of the internships, there are needs for additional information to state by the SMEs in recruiting interns. Please state if you need any additional information you need to add.

Please write your SME's additional information details here

Examples

- Overtime: This position may require uncontrollable, unscheduled overtime in excess of the defined internship working hours, such as in excess of 40-hour work week.
- On Call: This position may require the incumbent to be on call 24 hours per day, seven days per week (applicable for some cybersecurity positions such as penetration tester, network defence, incident response team etc.)
- Motor Vehicle Operation: You must possess a valid country/state driver's license at the time of appointment.
- Passport: There may be International duty assignments which would require you to obtain and maintain an official passport.

What will be provided for the intern by your SME

SMEs should define some of the benefits of their offered internship which differs for particular cybersecurity internship programs, subjects and SMEs' internship goals. SMEs should state as wide and realistic benefits as possible in this section including the tools provided, hands on activities, specific programs to be used, available infrastructure, info about the team, company staff, working environment and conditions (hybrid, online, office work), extra support including sport, lunch&learn, get-togethers, happy hours, company-wide wellness days, opportunity to work internationally, travel in and out of the country and more.

Please **define** your SME's information below and see some of the examples.

Please write what will be provided for the intern by your SME details here

Examples:

- A clearly defined career framework to help you successfully manage your career
- Leadership development and virtual training opportunities
- A leadership team that prioritizes your health and well-being; offering a remote work environment and flexible work hybrid situations
- Employee equity plan for all and wealth enablement plan for select customer facing roles



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- Comprehensive wellness program including unlimited PTO, company-wide wellness days, wellness app subscriptions, lunch & learn, book club, get-togethers, lunch & communication stipends, Team events & cocktail days, happy hours and much more
- Professional development and the opportunity to learn the ins and outs of cyber insurance, cyber security as well as continuing to build your professional skills in a team environment
- Hybrid working
- Private health insurance
- Opportunities for growth and innovation
- Experienced and strong team
- High growth-paced environment with collaborative and unique team culture
- Health Insurance during the internship
- Professional Growth & Career Opportunities as a support for your personal and professional development with educational materials and expenses & relevant conferences abroad to stay up to date with the latest industry trends & online courses or coaching - and support you pursuing ones that you are passionate about!
- Challenging projects, regular feedback, healthy competition
- Fun & Relax working environment: When we're in the office; music, jeans and t-shirts are the norm & kitchens stocked with healthy & tasty snacks & drinks
- Continuous learning opportunities to develop your mastery.
- Unlimited working model that focuses on wellbeing of interns.
- Working remotely and flexibly, as we take care to remove borders.
- Reimbursement of transportation to the office
- Various need and special day leaves (birthday, pet adoption, etc.)
- Meal card that allows you to eat whatever you want, wherever you want
- Discounts from several brands
- Onboarding program
- A high-speed computer, a must for a technology company
- No dress code
- Friendly office in the center of X (you can state your office location) , if you like working from the office
- Workshops, events and trainings tailored to you for development and different experiences
- The reservation system where you can always reach our institution doctor for your health
- Opportunity to work in international projects,
- Opportunity of working with new & trend technologies,
- Gym (at Office location),
- Flexible working hours (08:00-17:00, 09:00-18:00, 10:00-19:00),
- Recreation space: PlayStation, pinball, table tennis, basketball court, coffee shop & cafe, resting rooms,
- Practical experience with a wide variety of cybersecurity engineering tasks
- Collaborating hand-in-hand with skilled teams of cybersecurity engineers
- Shadowing, mentoring, and training opportunities with seasoned professionals
- Opportunity to participate in networking events and company meetings and more.



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INTERNSHIP WORK ASSIGNMENTS

Definition: Work assignments for interns are valuable interventions to ensure that the interns are provided enriching learning. SMEs can **choose** from the below listed work assignments.

Please write your SME's internship work assignments details here

Examples:

***Do research for a new project:** This is a helpful task to give an intern since it can help them to improve their research skills where SMEs can ask them to figure out subjects like resources, budget and timeline SMEs would need for a project.

***Learn more about competitors:** Ask your interns to use their spare time to research competitors. This is a great way for your company to keep up with what's going on in your industry. They can also look into recent market trends to help your business stay current.

*** Figure out better systems:** Having someone new to the industry can be quite beneficial since they may look at things in new ways. Have your intern look at the current way your company operates and make their own suggestions. Ask them to support their ideas with data and research.

*** Create a presentation:** Public speaking is a useful skill for many professionals to have. Help your interns develop these skills by asking them to be in charge of presenting at your next meeting in collaboration with your company's staff.

***Keep an organized workspace:** Staying organized is an important part of any job. If an intern needs additional work to do, ask them to clean up their workspace. You can even ask them to help organize and tidy up any common spaces in the office.[4]

*** Complete additional training:** Once your interns complete their training, have some supplementary documents or videos for them to watch in their spare time. This is a great way to keep them busy while progressing their knowledge in your field.

***Sit in on client meetings:** If possible, ask your intern to attend your next important client meeting. While they may not necessarily contribute to the meeting, this is a chance for them to learn what this process looks like. As they become more experienced, you can ask them to participate further. (www.balbix.com)

*** Help with brainstorming sessions:** The next time your team meets to brainstorm, ask your interns to join. They may have some innovative ideas to share. This experience also helps them learn to speak up in group settings and collaborate with other staff. (www.nist.gov)

*** Train newer interns:** Ask your more experienced interns to help train any incoming interns. They may have a helpful perspective since they went through similar training when they first started.

*** Lead a team meeting:** As your interns become more comfortable at your company, you can ask them each to be in charge of leading a team meeting. This gives them the chance to develop their leadership skills and prove their value to the team.

*** Do errands for the office:** When everyone at work is busy, you can ask your intern to do some errands for the office. They may appreciate taking a brief break from their normal tasks to go pick up lunch or mail some packages. Just make sure to incorporate more enriching tasks into the rest of their day.[7]

***Manage the company's social media:** Depending on your company, you may be able to have an intern manage your social media accounts. Ask them to create posts on behalf of the company or respond to customers online. Social media skills are valuable for many professionals to have.



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***Review company materials:** Ask your interns to look over different company materials and see if there is anything they would change. They may find ways you can improve your website, social media pages, marketing materials or even your employee handbook.

***Attend company networking events:** Invite your interns to come along to company networking events. This gives them the opportunity to connect with other professionals in your industry. It also gives them a glimpse into events they might attend when working in their first full-time job.

*** Draft internal communications:** If you noticed one of your interns is a talented writer, consider asking them to work on your company's internal communications. They can write company-wide announcements or draft up important emails.

*** Create their own capstone project:** A capstone project is a long-term project that your intern can work on throughout the course of their internship. This kind of project can be their go-to when they finished their tasks for the day. Ask them to create their own project that applies the skills they are learning at your company. Consider having them present it to your team at the end of their internship.[9]

*** Enter data into spreadsheets:** Knowing how to use spreadsheet software can be a useful skill in many professions. Having your intern enter data is a useful way to spend their time and can be helpful for your company.

*** Ask customers for feedback:** Interns in customer-facing roles can benefit by being responsible for reaching out to customers to learn their feedback. Consider either having your intern call clients or send out surveys.

SPECIFIC WORK ROLES

Definition:

Work roles are a way to describe a grouping of work for which someone is responsible or accountable. Work Role names are not synonymous with job titles or occupations. Work Roles are composed of tasks that constitute work to be done; tasks include associated Knowledge and Skill statements that represent learners' potential to perform those tasks.

Each specific internship subject in cybersecurity areas consist of some specific work roles that are offered by SMEs. These portray a range of subjects that are important for an intern to perform. Please **list** your work roles as what you expect from an intern to do specific to your SMEs internship subject.

Please write your SME's specific work roles details here

Examples:

- Help preparing Cybersecurity/IT audit activities including: developing, driving and executing complex audit plans for his/her assigned area(s) of responsibility.
- Help preparing Cybersecurity/IT audit engagements including risk assessments, audit planning, audit testing, control evaluations, audit communications and follow up and verification of issue closure.
- Identifies early identification of emerging complex Cybersecurity/IT control issues and reporting them timely to appropriate senior management and business stakeholders.



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- Help finalizing audit findings and using judgment opine on the control environment.
- Support on identifying project requirements by expediting communication between the Audit Analytics team and project sponsors through use of conference calls, video conferences, and online meetings. If needed, may also arrange face to face meetings for all parties involved in the project to finalize key requirements.[2]
- Help prioritizing the requirements to ensure there are quick wins in development process and that project stays on track and daily goals are achieved.
- Must be skilled in techniques to identify project sponsor needs, negotiate priorities between the different groups, and then collaborate with developers to ensure that the requirements are implemented effectively.[8]
- Performing/Executing testing of data analytics programs and operational audit projects by use of various computer programming languages such as ACL, Visual Basic, SQL, Python and advanced Microsoft Office Excel.
- Track and resolve testing and project sponsor identified program problems until resolved.
- Help performing quality review of all computer program documentation according to Cybersecurity/IT professional and LFG Internal Audit Data Analytics standards prior to delivery to Project Sponsor.
- Support creating Internal Audit management and the project sponsor with periodic project status of the actual hours and dollars spent compared to the budget as well as an estimate of percent of completion of the project.
- Serve as a technical resource and consult with teammates and other Internal Audit staff on a broad variety of data analytics matters/issues related to his/her assigned projects.
- Participate in brainstorming and creation of ad hoc/continuous monitoring routines as needed to support internal investigations, special projects and the on-going monitoring of fraud risks.
- Communicate effectively, both verbally and in written form with team mates, third party consultants and business unit management.
- Be familiar with Cybersecurity/IT Internal Audit standards and know how to effectively execute operational audit testing and to validate and resolve audit findings.
- Responsible for execution of production data analytic programs and resolution of any exceptions identified by these programs in consultation with business unit management.
- Help drafting final memos and reports to business unit and Internal Audit management for the completed data analytic work.
- Follow department and team protocols to maintain confidentiality of records and information used in all projects.
- Help diagnosing and resolving problems in response to customer reported incidents.
- Researching, evaluating and providing feedback on problematic trends and patterns to support customer support requirements.
- Interacting with internal and external stakeholders to provide IT guidance and solutions.
- Help the staff about installing, configuring, integrating, troubleshooting, optimizing and maintaining customer hardware and software to maximize system availability.
- Help identifying and specifying information system security requirements and ensuring application of information security/information assurance policies, principles and practices.

PROFICIENCY LEVELS

Description: SMEs should define the proficiency levels for internship areas of cybersecurity based on the fact that each cybersecurity area require some degree of capability or expertise in a specific knowledge, skill and ability format for interns to perform. SMEs should choose the proficiency level which are not tied to a specific grade level or years of experience, they are required for each work role



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varies by position, career level and organizational needs. It is also likely that the interns would find themselves at different proficiency levels for different work roles. Therefore, the intern and intern supervisor should determine which proficiency level is right for the intern for each work role.

SMEs can use the below categories (entry, intermediate and advanced) and **define** exactly what proficiency level they expect from the interns.

Please write your SME's proficiency level details here

Entry

At this level, the interns should;

- have familiarity with basic concepts and processes and the ability to apply these with frequent, specific guidance
- be able to complete tasks on your own after being told or shown how but require close or frequent guidance
- be able to perform successfully in routine, structured situations

Intermediate

At this level, the interns should;

- have extensive knowledge of basic concepts and processes as well as experience applying these with only periodic high-level guidance
- be able to perform successfully in non-routine and sometimes complicated situations
- be able to draw conclusions and make recommendations

Advanced

At this level, the interns;

- must have an in-depth understanding of advanced concepts and processes and experience applying these with little to no guidance
 - must be able to serve as a resource and provide guidance to others
 - must also be able to perform successfully in complex, unstructured situations
- (www.niccs.cisa.gov)

Evaluation is an important part to identify strengths and weaknesses of the interns' developmental progress along with assessing the host company's organizational readiness, onboarding and orientation skills, feedback and more.

In this part, we present information about what a proper cybersecurity internship program should include in terms of evaluation of the entire internship program. We prepared and presented various **evaluation forms** which are ready-to-use materials to make the internship program more effective covering processes from beginning to an ending of a proper cybersecurity internship program (forms can be applied/used in developing other internship programs in various fields as well). It is important to be aware of the fact that evaluation processes must start from beginning of the internship, not at the end, to make sure that each sides properly understood the internship rules, roles and expectations, specific objectives, orientation and training needs. By keeping this in mind, we have prepared evaluation forms covering beginning and end of an entire internship program as described in below sections.

To begin with, it is important to see the overall scheme of the progresses to obtain an intern where we summarized them under the below table:

Step 1	Company	Needs an intern and prepares internship proposal form by stating the needs
Step 2	Company's Internship Supervisor	Submits the internship proposal to the Internship Coordinator or any other responsible person
Step 3	Company's Internship Supervisor	Composes an internship position flyer/template and posts it on online platforms related to intern recruitment, job finding, sector specific webpages or any other platforms.
Step 4	Company's Internship Supervisor	Receives and reviews resumes and selects with whom they want to contact/interview
Step 5	Company's Internship Supervisor	Conducts <ul style="list-style-type: none"> • Interviews (online or inperson) • Background check (as whatever the requirements of the selected internship subject) • Reference check (if requested)
Step 6	Company's Internship Supervisor	Chooses the intern(s) to take/hire and offers the internship proposal (discuss the details), when the agreement is made, the company removes the internship post from the online platforms where they were posted.
Step 7	The Intern and Company's Internship Supervisor	Each should complete/sign the necessary documents including internship agreement form (it is attached as table 3)
Step 8	The Intern and Company's Internship Supervisor	Each completes the evaluation forms of the internship and submits them to the company internship coordinator/any responsible person. (it is attached as table 5 and 6)
Step 9	Company's Internship Supervisor	Writes letter of recommendation for the intern at the end of internship and signs internship completion certificate/document. (it is attached as table 7)

TABLE 1. STEPS FOR COMPANIES TO TAKE AN INTERN

Organizational Readiness

SME companies should possess some skills/resources to provide at least the minimum criteria for hosting an intern where SMEs should consider/assess various questions to figure out their organizational readiness, especially considering their objectives and infrastructures for cybersecurity internships, physical tools, staff, materials and resources. To better evaluate these components, the below table will help the companies:

Question	Answer
Does the company have a specific goal/objective to have an intern?	
Who will manage the intern's day-to-day work? (please specify the right staff as internship company supervisor/manager)	
Where the intern will be accommodated/work at the office and are physical objects ready (chair, desk, an area or else)?	
Are there other setups that need to happen before the intern arrives? (physical arrangements at the office)	
Which computer (his or the company's) will the intern use? If the intern does not have a proper computer, (to run some systems), will the company provide a computer?	
Does the company have any staff and time to train the intern?	
Does the company have the ability and willingness to provide oversight and guidance?	
Does the company have any specific projects (a planned work) for an intern to work on?	

TABLE 2. ORGANIZATIONAL READINESS

After deciding on recruiting an intern, the following example of an Internship Agreement Form can be used to help companies in terms of organizational readiness.



INTERNSHIP AGREEMENT

Company Name:	
Company Department:	
Company Internship Supervisor Name:	
Company Intern Supervisor Email and Phone:	
Internship Job Title:	
Requested Start Date:	Requested End Date:
Intern number of proposed work hours per week:	
Place of Internship/Address:	
Website of the Company:	
Intern Name:	
Intern Email and Phone:	
Intern Address:	

Signature of the Company Representative

Signature of the Internship Supervisor

Signature of the Intern

Date



TABLE 3. INTERNSHIP AGREEMENT FORM

Evaluation of the Internship

Evaluation is a crucial part of internships in order to help the interns and companies to figure out where the interns excelled, how they adapted to the company culture, how operated in teams, how interacted with the subject experts, wide range of soft and hard skills developed, personal gains and many more.

Evaluation of an internship considers the intern and hosting company sides. Therefore, 2 separate evaluations are necessary. In this project, we have prepared 1 intern evaluation form and 1 company evaluation form based on scientific and sector specific resources, studies and reports and produced a comprehensive, effective and practical evaluation forms that companies can directly use/adapt in their cybersecurity internship programs.



INTERNSHIP EVALUATION FORM TO BE COMPLETED BY THE INTERN

Name of the Company _____

Department/Division of the Company _____

Starting and Ending Dates From _____ to _____

Intern Name _____

Company Supervisor Name _____

Please rate the following aspects of your Internship placement on the basis of this scale:

- **4.** Excellent (Consistently exceeds expectations)
- **3.** Good (Sometimes exceeds expectations)
- **2.** Average (Meets expectation)
- **1.** Poor (Rarely meets expectations)
- **0.** N/A Not Applicable (Not applicable to this internship experience)

The below form's time period (weeks) can be extended as long as the companies wish.

Please select the appropriate rating for each aspect of your internship

A. Please select the appropriate rating for each aspect of your internship.	WEEK 1 Fill in dates here	WEEK 2 Fill in dates here	WEEK 3 Fill in dates here	WEEK 4 Fill in dates here	WEEK 5 Fill in dates here
Adequacy of company supervision	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Helpfulness/support by the company supervisor	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Acceptance/support/cooperativeness by fellow workers	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Opportunity to apply/use my knowledge	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Opportunity to develop my overall technical IT skills	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Opportunity to develop my overall cybersecurity knowledge	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Provided levels of responsibility consistent with my cybersecurity ability and growth	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Adequate training about learning objectives	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
The training was challenging and stimulating	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Opportunity to develop networks with cybersecurity experts and industry	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
The level of orientations provided by the hosting company	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Attempt to offer feedback on my progress, work and abilities	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Company's effort to make it a learning experience for me	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Gave me an actual and realistic preview of my field of interest in cybersecurity	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
I feel I am better prepared to enter the field of cybersecurity after this experience	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
I felt I was productive for the department	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

TABLE 4. INTERNSHIP EVALUATION FORM TO BE COMPLETED BY THE INTERN

Please select the appropriate rating for each aspect of your internship.	WEEK 1 Fill in dates here	WEEK 2 Fill in dates here	WEEK 3 Fill in dates here	WEEK 4 Fill in dates here	WEEK 5 Fill in dates here
There were ample opportunities for learning	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
I had regular meetings with my supervisor and received constructive, on-going feedback.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
My internship supervisor was available and accessible when I had questions/concerns	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
B: Through this internship I had the opportunity to use and develop my:					
Communication skills with staff, managers and industry representatives	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Interpersonal/human relations skills	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Problem-solving skills in general and specifically in cybersecurity	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Further technical computer skills	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Critical thinking skills in general and especially concerning cybersecurity	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Self-confidence and ability to defend my ideas and proposals.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
C: Other: List other factors or opportunities that were provided for your internship, then rate them accordingly.					
1. _____	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
2. _____	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
3. _____	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
4. _____	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
5. _____	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

TABLE 4. INTERNSHIP EVALUATION FORM TO BE COMPLETED BY THE INTERN



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Complete this section at the end of your internship.

D. Overall how would you rate this internship?

Excellent Good Average Below average Poor

E. Would you...

Train in this company again Yes No Not Sure

Train under this supervisor again Yes No Not Sure

Recommend this company to other interns? Yes No Not Sure

F. Suggestions for improving this particular cybersecurity internship

Intern's signature _____

Date _____

Thank you very much for completing this evaluation of your internship. We take your comments very seriously. Please **return** this evaluation to the company internship supervisor.





**INTERNSHIP EVALUATION FORM TO BE COMPLETED
BY COMPANY INTERNSHIP SUPERVISOR**

Name of the Company _____
Department/Division of the Company _____
Starting and Ending Dates From _____ to _____
Intern Name _____
Company Internship Supervisor Name _____

Please rate the following aspects of your Internship placement on the basis of this scale:

- **4.** Excellent (Consistently exceeds expectations)
- **3.** Good (Sometimes exceeds expectations)
- **2.** Average (Meets expectation)
- **1.** Poor (Rarely meets expectations)
- **0.** N/A Not Applicable (Not applicable to this internship experience)

The below form's time period (weeks) can be extended as long as the companies wish.

Evaluation of personal qualities of the intern observed during the internship. Select one evaluation level for each area by marking an "X" inside the number that represents the intern's performance.

A. Please select the appropriate rating for each aspect of the intern's internship performance	WEEK 1 Fill in dates here	WEEK 2 Fill in dates here	WEEK 3 Fill in dates here	WEEK 4 Fill in dates here	WEEK 5 Fill in dates here
Learning Ability					
Asks pertinent and purposeful questions	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Seeks out and utilizes appropriate cybersecurity and IT resources	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Observes and/or pays attention to others' work	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Skills to analyze professional problems of cybersecurity	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Skills in putting theoretical cybersecurity knowledge into practice.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Skills in comprehending and completing the tasks required by the internship.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Ability to understand complexity of cybersecurity subjects	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Knowledge and competence in different areas of cybersecurity work (ex. Cloud, network systems etc.)	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Which learning abilities do you think the intern needs to improve? Please Explain \Rightarrow					
Personal Competence					
Being organized and having effective time management skills.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Ability to think independently.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Ability to defend her/his ideas and proposals.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Ability to develop her/himself by using the cybersecurity knowledge gained in the work place.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Aptness for teamwork.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Ability to think creatively and critically.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

**TABLE 5. INTERNSHIP EVALUATION FORM TO BE COMPLETED BY COMPANY
INTERNSHIP SUPERVISOR**

A. Please select the appropriate rating for each aspect of the intern's internship performance	WEEK 1 Fill in dates here	WEEK 2 Fill in dates here	WEEK 3 Fill in dates here	WEEK 4 Fill in dates here	WEEK 5 Fill in dates here
Personal Competence					
Works with technical IT procedures appropriate to the selected cybersecurity subjects	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Listens to others in an active and attentive manner	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Effectively participates in meetings or group settings	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Seeks to comprehend and understand the “big picture” of cybersecurity	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Breaks down complex tasks/problems into manageable pieces	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Respects input and ideas from other sources and subject experts	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Which personal competences do you think the intern needs to improve? Please Explain ⇒					
Work Habits, Interpersonal and Team Work Skills					
Is prompt in showing up to work and meetings	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Dress and appearance are appropriate for our company	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Kind and respectful demeanor to co-workers and supervisors	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Awareness and sense of responsibility and interest in work	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Brings a sense of value and integrity to the job	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④
Behaves in an ethical manner	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④	① ② ③ ④

**TABLE 5. INTERNSHIP EVALUATION FORM TO BE COMPLETED BY COMPANY
INTERNSHIP SUPERVISOR**



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A. Please select the appropriate rating for each aspect of the intern's internship performance	WEEK 1 Fill in dates here	WEEK 2 Fill in dates here	WEEK 3 Fill in dates here	WEEK 4 Fill in dates here	WEEK 5 Fill in dates here
Work Habits, Interpersonal and Team Work Skills					
Supports and contributes to a team atmosphere	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Manages and resolves conflict to a team atmosphere	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Controls emotions in a manner appropriate for work	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Ability to comply with company and work procedures	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Reliability and dependability on the usage of cybersecurity data and tools	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
When given feedback, takes action to improve/change	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Effectively relates to and cooperates with coworkers.	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Demonstrates efficient use of time	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Completes work despite obstacles/problems	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Demonstrates openness to working with people of different genders, cultural, religious, ethnic backgrounds, ages & abilities	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Which work habits, interpersonal and team work skills do you think the intern needs to improve? Please Explain \Rightarrow					
Professionalism					
Practices professional appearance and conduct tasks accordingly	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Demonstrates professional confidence	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Demonstrates professional demeanor with clients or customers	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Shows trustworthiness and confidentiality in critical aspects of cybersecurity such as data, passwords, tools, customer data and others	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Demonstrates/practices ethical behavior about sensitive cybersecurity subjects such as data usage	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Regularly on time and maintains agreed working hours such as some cybersecurity operations usually have 7/24 working system	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

For Company Internship Supervisors to complete at the end of the internship

B. Overall how would you rate this internship?

Excellent Good Average Below average Poor

C. Would you...

Would you supervise this intern again? Yes No Not Sure

Would your company host this intern again? Yes No Not Sure

Would you recommend this intern to other companies? Yes No Not Sure

D. Suggestions for improving this particular cybersecurity internship from the perspective of your company's internship supervisor

Internship Supervisor Signature _____

Date _____

Email:

Contact Number:



**TABLE 5. INTERNSHIP EVALUATION FORM TO BE COMPLETED BY COMPANY
INTERNSHIP SUPERVISOR**



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Monitoring of the Internship



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It is important for company internship supervisor to monitor the interns' progresses as part of the entire internship program where weekly and/or monthly monitoring progress reports can be used to provide detailed feedback. Especially considering the long term internships, conducting evaluations in a planned schedule (ex. mid-term) would help the host company to properly monitor various aspects of internships. To do so, we have prepared the below "scored intern progress report" tool as an example/resource to be used by the companies after analysing various internship reports, scientific database and sectorial resources.

Please modify the below tool based on your company's internship preferences, rather it is for evaluation of the first quarter of the internship, rather for week 2, 3 or 5, or as an interim or final evaluation.



SCORED INTERN PROGRESS REPORT FORM TO BE COMPLETED BY COMPANY INTERNSHIP SUPERVISOR

The following scoring scale will assist internship supervisor in monitoring the intern's progress,

(5) Strong

-Work at this level exceeds the standard. It is thorough, complex, and consistently portrays exceptional control of content, skills, and problem-solving strategies. Work at this level would be expected from a professional cybersecurity expert.

(4) Proficient

-Work at this level meets the standard. It is strong, solid work that has more strengths than weaknesses. Work at this level demonstrates mastery of content, skills, and problem-solving strategies and reflects considerable care and commitment.

(3) Developing

-Work at this level shows basic, but inconsistent mastery and application of content and skills. It shows some strengths but tends to have more weaknesses overall.

(2) Beginning

-Work at this level is often superficial, fragmented, or incomplete. It may show a partial mastery of content and skills, but it needs considerable development before reflecting the proficient level of performance.

(1) Exploring

-Work at this level is minimal. It typically portrays a lack of understanding and use of appropriate skills and strategies. Work at this level may contain major errors.

Please select one evaluation level for each area by marking an "X" inside the number that represents the intern's performance.



SCORED INTERN PROGRESS REPORT FORM

TO BE COMPLETED BY COMPANY INTERNSHIP SUPERVISOR

Name of the Company _____

Department/Division of the Company _____

Progress Check: (please state which evaluation, ex. Week 3, interim, mid-term, final etc.)

Intern Name _____

Company Internship Supervisor Name _____

Interacts constructively	with staff/colleagues, administrators, site supervisors, mentors and any other person (when applicable). Examples to judge: ♣ Shows consideration and respect for the thoughts and feelings of others ♣ Demonstrates effective verbal, non-verbal, and signed communication skills ♣ Demonstrates flexibility with others ♣ Solicits suggestions and feedback from mentor and faculty supervisor ♣ Actively listens and responds to others ♣ Exhibits self-confidence and enthusiasm for interpreting ♣ Exhibits energy, drive, and determination to become a professional cybersecurity expert.	(1) (2) (3) (4) (5) (1) (2) (3) (4) (5)
Displays honesty and integrity	Examples to judge: ♣ Maintains confidentiality with respect to assignment-related information ♣ Elicits trust and respect from peers, mentor, and supervisors ♣ In completing internship assignments, produces original work and credits sources when appropriate ♣ Maintains neutrality and objectivity	(1) (2) (3) (4) (5) (1) (2) (3) (4) (5) (1) (2) (3) (4) (5) (1) (2) (3) (4) (5)

Is aware of and acts according to institution policies and practices	Examples to judge: ♣Has obtained and read institution policy manual ♣Adheres to rules and policies of the setting ♣Is dependable, conscientious, and punctual ♣Arrives on-time or early ♣Represents WOU as a positive pre-professional interpreter and intern ♣Completes assigned tasks in a timely manner ♣Reflects on performance and attitudes as an interpreter	① ② ③ ④ ⑤ ① ② ③ ④ ⑤
Meets work schedule demands	Examples to judge: ♣Is prepared for daily activities ♣Meets and consults with mentor each week to debrief ♣Meets and consults with faculty supervisor on assigned dates ♣Consults mentor and/or faculty supervisor immediately as challenges or difficulties arise	① ② ③ ④ ⑤ ① ② ③ ④ ⑤ ① ② ③ ④ ⑤ ① ② ③ ④ ⑤
Attire	Examples to judge: ♣Professional demeanor including posture, mannerisms, eye gaze and non-verbal communication. ♣Appropriate attire for the given situation (contrasting, solid color as well as range of formality)	① ② ③ ④ ⑤ ① ② ③ ④ ⑤
Is respectful of cultural patterns and expectations operating within the scope of the assignment	Examples to judge: ♣When questions or concerns arise, communicates with mentor, faculty supervisor and site supervisor ♣Speaks and behaves in a manner that is sensitive to linguistic and cultural differences and respects the dignity and worth of others ♣Establishes good rapport with consumers and colleagues ♣Seeks to address the varied signing needs of consumers ♣Regularly re-assesses his/her commitment to the profession ♣Reflects upon and evaluates effectiveness as an interpreter, and seeks to improve skills ♣Receives feedback in a positive manner and makes necessary adjustments	① ② ③ ④ ⑤ ① ② ③ ④ ⑤

Comments:

Signature _____

Date _____

TABLE 6. SCORED INTERN PROGRESS REPORT FORM

INTERNSHIP COMPLETION LETTER

Internship completion letter acts as a proof that the intern has completed the internship program. The importance of this letter is that it supports/qualifies the intern to seek higher-level job opportunities in any industry. It also proves that the intern has received internship related benefits, gained experience, sector-specific knowledge, trainings (if any), learnt the basic corporate know-how to work or take a job and more.

Based on our cybersecurity sector-specific research, a proper internship completion letter should include;

- *an entrance sentence with the name of the intern, name of the host company and name of the internship program,
- *clearly stated date info,
- *specific projects that the intern has worked in and accomplishments he/she obtained,
- *statements of the intern's personal competences, attitudes and characteristics.

In this project, we created the below document as a proper example that SMEs can use/adopt.



INTERNSHIP COMPLETION LETTER

Examples

For **Entrance** please select 1 from the below examples:

1. “This certificate is presented to _(Name of the intern)_ in recognition of outstanding accomplishments and contributions for the _(Name of the internship)_ program.”
2. “We present this certificate to _(Name of the intern)_ in appreciation for the work as an intern at _(Name of the company)_.

TABLE 7. INTERNSHIP COMPLETION LETTER

3. “This is to certify that Mr. / Ms. _(Name of the intern)_ has successfully completed _(Name of the internship)_ program at _(Name of the company)_.

For Date info, please select 1 from the below examples:

1. From _(start of the internship date)_ to _(end of the internship date)
2. For _(number)_ week covering between _(start of the internship date)_ to _(end of the internship date)
3. The duration of this internship was from _____ to _____.

For Specific Project or Accomplishments, please select 1 from the below examples:

1. During the internship, Mr./Mrs. (name of the intern) worked in various areas of (state the cybersecurity area) where he/she has done testing of cybersecurity tools that our company uses.
2. During the internship, Mr./Mrs. (name of the intern) was exposed to the various activities in (state the cybersecurity area)
3. Mr./Mrs. (name of the intern) has worked on a project titled (name of the project). This project was aimed at (purpose of the project). As part of the project, he/she has (work done by intern)
4. Mr./Mrs. (name of the intern) has worked on the project (name of the project) under the supervision and guidance of (name of the expert).

For the intern’s personal competences, attitudes and characteristics, please select 1 from the below examples:

1. Mr./Mrs. (name of the intern) showed good skills in his/her work and we found him to be curious and hardworking and his association with us was very beneficial.
2. We found Mr./Mrs. (name of the intern) very inquisitive and hardworking and he/she was very interested to learn the functions of our core division and also willing to put his best efforts and get into the depth of the subject to understand it better.
3. During his/her internship he/she has demonstrated his/her skills with self-motivation to learn new skills along with good personal communication and cooperation skills with the team. His/Her performance exceeded our expectations and he/she was able to complete the given tasks, responsibilities and projects on time.
4. Mr./Mrs. (name of the intern) demonstrated high comprehension skills with the utmost expertise by exhibiting maximal efficiency.

For certifying the intern's completion, please select 1 from the below examples:

1. I hereby certify Mr./Mrs. (name of the intern) overall internship as exemplary/good/satisfactory and wishing him/her the best of luck in the future endeavors.
2. We take this opportunity to thank Mr./Mrs. (name of the intern) and wish him/her all the best in the future work life.
3. It is my honor to certify this letter for such a talented cybersecurity intern following the completion of his/her internship, and hopefully, see him/her move on forward in the cybersecurity industry career.

Sincerely,

Thanks & Regards

Best Regards

Yours sincerely

Signature/Stamp

Name of the Company

Authorized By/Name of the Company Representative

Place/Location/Adress

Date



TABLE 7. INTERSHIP COMPLETION LETTER

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