

Secure Software Engineering Training

The expert-led approach to shifting security left

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secure



In 60 words

The most secure code is written by those that know how it could be attacked.

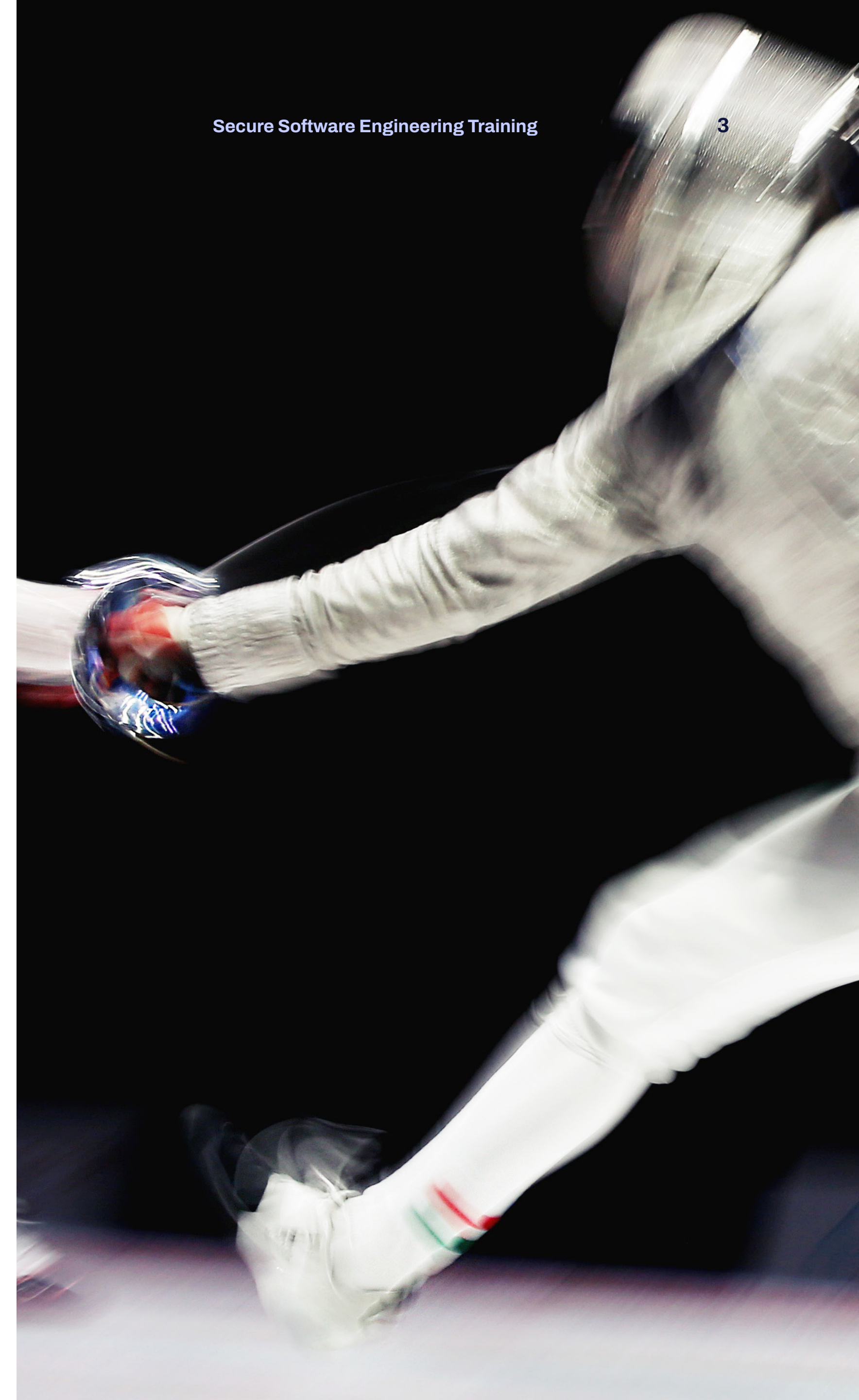
WithSecure's Secure Software Engineering Training is a modular service conceived by attack-minded security experts and delivered to software engineers, enabling them to create software that is secure by design and reduce the cost of securing applications. We deliver our training through Playground, our in-house platform, which we use to train our offensive security experts.

Creating a 'secure by design' culture

The shift to agile software development methodologies means that development cycles are getting shorter and it is not possible to adopt the traditional approach of plugging security at the end of the software development life cycles (SDLCs) in the form of a penetration test. The difficulty of keeping up with the pace of modern development is now a leading cause of security vulnerabilities.

Vulnerabilities found in production IT are many times more costly to fix than vulnerabilities found in development and testing and can result in high-profile breaches. Developers typically spend 8 hours investigating and remediating a security bug after it has been brought to their attention.

This is why many organizations are embracing a 'DevSecOps' culture that 'shifts security left'.



Challenges we overcome

Building 'secure by design' is easier said than done. Technologies can secure the SDLC, but their benefits are limited. Shifting left is about motivating people to change the way they work.

If those changes are too cumbersome, engineers will discard them rather than slow down the business; if they are too superficial, engineers will perceive them to be a box-ticking waste of time. If training methods are not engaging or informative enough, they will not result in more secure software.

Is it possible to develop a 'secure by design' mentality within your software engineers that delivers sustained security benefit?

We believe it is.



Our approach

Our training speaks directly to those who do not have a background in security: technical experts like developers, engineers, programmers. Our approach is based on 10 years of experience of delivering security training through continuous learning. We deliver learning outcomes that are superior to many other learning management systems because of the way we have designed our course:

- We don't only teach people what to do: we teach them why they need to do it. We demonstrate how code vulnerabilities can be abused, so that developers can avoid creating them.
- We focus on security strategies, which developers can then apply flexibly to whatever languages and frameworks they are working with, and in any situation.
- We give participants the tools they need to research a topic that hasn't been taught to them, instilling deep principles rather than superficial knowledge of how to perform specific tasks.
- We use experimentation because it enables engineers to consolidate what they have learnt and apply their knowledge to novel scenarios.

- We use multi-stage problem solving rather than providing instant feedback to better represent real-life engineering. This may require several trial and errors before a suitable approach is identified.
- Training is delivered by world-leading experts (our consultants) who communicate effectively and can flex to meet trainees' specific needs, wherever they may be located.
- Our training is engaging and developers want to complete the courses. We help accredit staff and develop their careers.

Training outcomes that we deliver

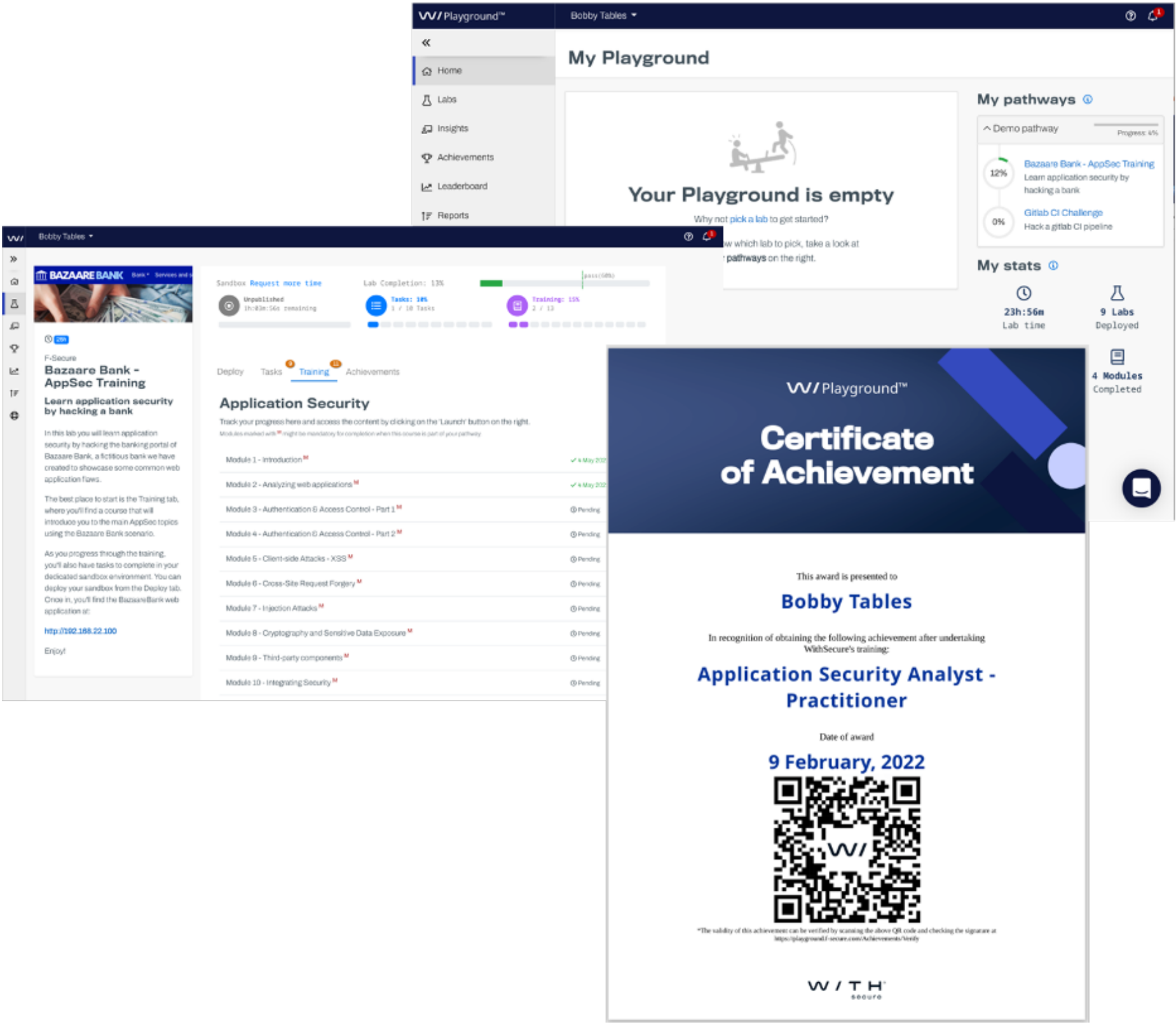
The outcome of using this approach is improved software development efficiency and greater resilience to security threats. Software costs less time and money to test and deploy, and the threat of financial loss and reputational damage caused by an attacker exploiting a vulnerability, is minimized.



Our training packages

Our packages are built out of the following components:

Name	Type	Component
On-Demand Manager Training	On-demand, Playground	Designed for software managers. Course materials for independent study, without access to the sandbox environments. Access for one year.
On-Demand Developer Training	On-demand, Playground	Course materials for independent study with access to full training modules within our sandbox environment. Access for one year.
Expert Start	Consultant-led workshop	Consultant led session to orientate participants and guide them through the first few stages of the course.
Expert Q&A Support	Consultant-led workshop	Q&A sessions with a consultant held after participants have advanced some way in the course.
Specialist Security Training	Consultant-led workshop	Expert-led training session focusing on objectives of importance to the client.
Capture The Flag Exercises	Consultant-led event	A selection of half-day capture-the-flag exercises to suit participants' development goals and interests.



Our training packages

We offer three core training packages:

Name of package	Components	Description	Outcome
Non-Coding Manager course	<ul style="list-style-type: none">Playground on-demand Manager Training for up to 15 peopleExpert Start	Enables managers and those leading the software lifecycle, to understand how to maximize the benefit they obtain from the learning materials on Playground.	Awareness of how to implement security principles into the Software Development Lifecycle.
Standard Developer course	<ul style="list-style-type: none">Playground on-demand Developer Training for up to 15 peopleExpert Start	Ensures that security engineers get the absolute best experience and value from tackling the sandbox scenario.	Understanding of how the major security vulnerabilities affecting applications can be prevented or mitigated.
Advanced Developer course	<ul style="list-style-type: none">Playground on-demand Developer Training for up to 15 peopleExpert Start2 Specialist Security Training sessionsExpert Q&A Support	Increased face-to-face time with the consultant gives participants opportunities to dive into parts of the training that are particular relevant for their roles, to ask questions, and to gain feedback on their ideas. This enhances retention and reinforces understanding.	As above, plus an enhanced appreciation of how to prevent and mitigate vulnerabilities in your specific business environment.

To any of the core packages can be added the following add-ons:

Name of add-on	Components	Description	Security outcome
Specialist Security Training	A single session from one of WithSecure’s senior subject matter experts.	Scoped individually and quoted as a single sum	Security outcome is to be agreed with the client in advance.
Capture the flag	A half day capture the flag exercise, in person at the client’s office.	Up to 60 participants per event	Team building; internal conference support; the fostering of a security culture among developers; practical experience applying security principles to new scenarios.

Training benefits we deliver

Secure Software Engineering Training enables developers to write software that contains fewer vulnerabilities, reducing security risk and overall security spend, improving DevOps productivity, and above all enhancing the value of your DevOps teams.

We have been training our adversarial consultants using this approach, for 30 years. Now, we are offering our training to clients so that they can benefit from the process through which we develop world-leading talent.

Secure Software Engineering Training is designed and delivered by security experts to application developers. We teach security principles that will endure utility to developers for years to come. Participants retain what they learn because they can hone their skills with practical exercises. As important, the training is fun.

How we are developing our training

We are expanding our offering to include more courses on DevOps and the Cloud, and we are looking at ways to use the same approach to training courses on threat hunting and attack detection.



Who We Are

WithSecure™ is cyber security's reliable partner. IT service providers, MSSPs and businesses along with the largest financial institutions, manufacturers, and thousands of the world's most advanced communications and technology providers trust us for outcome-based cyber security that protects and enables their operations. Our AI-driven protection secures endpoints and cloud collaboration, and our intelligent detection & response is powered by experts who identify business risks by proactively hunting for threats and confronting live attacks. Our consultants partner with enterprises and tech challengers to build resilience through evidence-based security advice. With more than 30 years of experience in building technology that meets business objectives, we've built our portfolio to grow with our partners through flexible commercial models.

Founded in 1988, WithSecure™ (former F-Secure for Business) is listed on the NASDAQ OMX Helsinki Ltd.

