Document Generated: 02/17/2026

Learning Style: Virtual Classroom

Technology:

Difficulty: Intermediate

Course Duration: 2 Days

Next Course Date: April 6, 2026

Securing Databases: Practical Database Security Skills for Safer Systems (TT8700)

About this course:

Securing Databases: Practical Skills for Safer Systems is an expert-led course designed for database administrators, developers, technical leaders, and

stakeholders who are responsible for protecting data in enterprise environments. As organizations place greater reliance on data to drive operations and decision-making, and as compliance requirements grow more demanding, securing your databases is no longer optional. This two-day course will provide you with the knowledge and practical skills needed to identify threats, reduce vulnerabilities, and protect the confidentiality, integrity, and availability of your data systems. This is lecture, follow-along demo style class where our security expert will walk you through practical skills and techniques you can mirror in real time, hands-on, on your machine.

The average salary of a Data Security Analyst is **$64,652** per year.

Course Objective:

By the end of this course, you will be able to confidently identify risks, secure sensitive data, and take effective steps to protect your database environments. This class is designed to provide you with practical tools and techniques that can be immediately applied in real-world scenarios. Below are some of the key skills you will develop during the course:

- Hunt for vulnerabilities safely and responsibly. Learn how to identify security flaws in databases using ethical bug hunting techniques without putting your systems at risk.
- Understand and apply core database security principles. Get comfortable with the fundamentals of data security and how they translate into smarter, safer database practices.
- Protect data at rest and in motion. Use proven strategies to secure your data during storage and transmission, reducing the chances of leaks or breaches.
- Spot and defend against common attack vectors. Recognize threats like SQL injection, malware, ransomware, and insider misuse—and know what to do about them.
- Implement strong privilege and access controls. Manage who can access what, and limit exposure with practical, role-based privilege management techniques.
- Build a proactive, layered security approach. Learn how to combine tools and strategies to create a resilient defense that helps keep your databases safe over time.

Audience:

- This is an **intermediate** -**level** database course, designed for those who wish to get up and running on developing well defended database applications. This course may be customized to suit your team’s unique

objectives.

Prerequisite:

- Familiarity with databases is required and real world experience is highly recommended. Ideally, students should have approximately 6 months to a year of database working knowledge.

Course Outline:

Bug Hunting Foundation

Why Hunt Bugs?

Safe and Appropriate Bug Hunting/Hacking

Principles of Information Security

Fingerprinting Databases

Data Flows and Validation

Database Security Concerns

Securing Data at Rest and in Motion

Assets

Privilege Management

Boundary Defenses

Continuity of Service

Vulnerabilities and Databases

Injection Attacks

Authentication and Access Control

Data Breaches

Malware and Ransomware

Insider Threats

Cryptography

Insecure Data Handling

Inadequate 3rd Party Security

Asset Inventory

Non Compliance

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