Software Auditing
Training Course Offered by The Westfall Team

Software Auditing is a 3-day course designed to provide a comprehensive knowledge base and practical skills for anyone interested in implementing or improving Software Quality Auditing techniques and practices in their organization and/or in establishing a Software Quality Audit Program. This course starts with an overview of software auditing basics, including a discussion of quality concepts, terms and definitions, the definition of an audit, a discussion of the benefits and consequences of conducting audits and of professional conduct. The different types of audits are described, the audit process is introduced, and industry standards and models related to audits are surveyed.

Course attendees will learn what is involved in initiating an audit, including the verification of the audit entry criteria, the definition of the audit's scope and purpose, and determination of the audit's inputs. The audit planning responsibilities of the auditor management and lead auditor are discussed. Audit strategies and estimation considerations are reviewed, and the contents of an audit plan are outlined.

Attendees will learn how to prepare for an audit by conducting a documentation review and creating audit tools, including a checklist, a plan for verifying each checklist item and interview questions. Attendees will practice executing an audit by holding opening and closing meetings, gathering objective evidence and documenting audit findings. Attendees will learn how to document the results of an audit in an audit report and what records should be retained for each audit.

This course defines the steps in creating a corrective action plan to address the finding of an audit and the evaluation, verification and follow-up of those corrective actions. This course ends with reviewing the administration of an audit program, defining the audit processes for an organization and discussing issues related to audit personnel.

Method of Instruction: This course is taught through lecture and interactive discussion. Actual examples from the software industry are utilized to make the information relevant. Throughout this course, learned skills are practiced using team exercises and case studies. For in-house courses, these exercises and case studies can also be tailored to include actual examples from your organization in order to make the training even more relevant to your environment. The emphasis of this course is on techniques that allow the attendees to transition the skills learned in this course to their own work environments.

Target Audience: Software auditors, quality engineers, project managers, functional managers, software developers, testers, and other software stakeholders who will be involved in planning, conducting audits, participating in the audit as an auditor or auditee, reporting audit results, planning and implementing corrective action, and/or establishing an audit program.

Course Objectives: Upon successful completion of this course attendees will be able to:

- Understand the basic concepts and terminology of software auditing
- Effectively plan a software audit once it has been properly initiated
- Prepare for a software audit and perform a document review
- Execute a software audit and gather objective evidence
- Document the software audit results in an audit report
- Evaluate corrective action plans and follow-up on software audit findings
- Establish a comprehensive software audit program for your organization

Other Software Auditing Courses:

Software Auditor Skills: This 2-day course is a subset of the Software Auditing course designed to provide a knowledge base and practical skills for anyone interested in improving the software quality auditing techniques and practices for conducting individual audits.

Customized Auditing Courses: These auditing course is modularized so that they can be easily customized for in-house course offerings that focus on the specific content and topics needed to meet your organization's exact training requirements. For in-house courses, class exercises can also be tailored to include actual examples from your organization in order to make the training even more relevant to your environment.

For more information about these and other course offered by The Westfall Team:

Visit our website at: www.westfallteam.com

Send an email to: lwestfall@westfallteam.com

Or call: 972-867-1172

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Detailed Outlines:

I: Software Auditing – The Basics	Software Auditing	Software Auditor Skills
1. Software Auditing – The Basics	Included	Included
a. Quality Concepts, Terms & Definitions	Included	Included
▪ Quality Defined	Included	Included
▪ Prevention vs. Detection	Included	Included
▪ Defect Detection Techniques	Included	Included
▪ Defect Prevention Techniques	Included	Included
b. Audit Defined	Included	Included
▪ Audit Defined	Included	Included
▪ Audit Principles	Included	Included
c. Benefits & Consequences of Audits	Included	Included
▪ Benefits of Audits	Included	Included
▪ Consequences of Audits	Included	Included
d. Professional Conduct (Independence, Objectivity, Conflict of Interest & Confidentiality)	Included	Included
▪ Independence & Objectivity	Included	Included
▪ Conflict of Interest	Included	Included
▪ Confidentiality & Proprietary Information	Included	Included
2. Types of Audits	Included	Included
a. Internal Audits	Included	Included
b. External Audits (Second Party & Third Party)	Included	Included
c. Quality System Audits	Included	Included
d. Process Audits	Included	Included
e. Product Audits	Included	Included
f. Project Audits	Included	Included
g. Supplier Audits	Included	Included
3. The Audit Process	Included	Included
4. Participant Roles	Included	Included
a. Client	Included	Included
b. Auditor Management	Included	Included
c. Lead Auditor	Included	Included
d. Auditors	Included	Included
e. Auditee Management	Included	Included
f. Auditee	Included	Included
g. Escort	Included	Included
5. Industry Standards & Models Related to Auditing	Included	Included
a. ISO 9001:2000	Included	Included
b. IEEE Software Engineering Standards	Included	Included
c. SEI Capability Maturity Model®	Included	Included

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II: Software Audit Initiating & Planning	Software Auditing	Software Auditor Skills
1. Audit Initiation	Included	Included
a. Audit Initiation Step	Included	Included
b. Audit Initialization	Included	Included
c. Audit Entry Criteria	Included	Included
d. Audit Scope & Purpose	Included	Included
e. Audit Inputs	Included	Included
f. Audit Inputs – Exercise	Included	Included
2. Software Audit Planning	Included	Included
a. Audit Planning Step	Included	Included
b. Auditor Management Planning Responsibilities	Included	Included
c. Lead Auditor Planning Responsibilities	Included	Included
d. Audit Strategies	Included	Included
e. Estimation Considerations	Included	Included
f. Audit Plan	Included	Included
g. Communication & Distribution of the Audit Plan	Included	Included
III: Software Audit Preparation	**Software Auditing**	**Software Auditor Skills**
1. Preparation Responsibilities	Included	Included
a. Audit Preparation Step	Included	Included
b. Auditor Preparation Responsibilities	Included	Included
c. Lead Auditor Preparation Responsibilities	Included	Included
d. Benefits of Good Preparation	Included	Included
2. Documentation Review	Included	Included
a. Documentation Review Purpose	Included	Included
b. Process Definition	Included	Included
c. Documentation Review – Exercise	Included	Shorter Exercise
3. Audit Tools	Included	Included
a. Checklists	Included	Included
▪ Standard Checklist Items	Included	Included
▪ Checklist – Example	Included	Included
▪ Checklist – Case Study Exercise	Included	Included
▪ Planning Checklist Item Verification	Included	Included
▪ Planning Checklist Item Verification – Case Study Exercise	Included	Shorter Exercise
b. Interviews	Included	Included
▪ Interview Questions	Included	Included
▪ Open-Ended Questions	Included	Included
▪ Context Free Questions	Included	Included
▪ Interview Question – Case Study Exercise	Included	Shorter Exercise
c. Sampling	Included	Summarized

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IV: Software Audit Execution	Software Auditing	Software Auditor Skills
1. Steps in the Execution of an Audit	Included	Included
a. Audit Execution Step	Included	Included
b. Audit Execution Process	Included	Included
2. The Opening Meeting	Included	Included
a. Conducting the Opening Meeting	Included	Included
b. Opening Meeting – Example Agenda	Included	Included
c. Conducting an Opening Meeting – Case Study Exercise	Included	---
3. Gathering Objective Evidence	Included	Included
a. Objective Evidence Defined	Included	Included
b. Gathering Objective Evidence	Included	Included
c. Examining Documents & Records	Included	Included
d. Observing an Event or Process	Included	Included
e. Interviewing	Included	Included
f. Taking Notes	Included	Included
g. Audit Execution – Case Study Exercise	Included	Shorter Exercise
4. Daily Meetings	Included	Included
a. Daily Audit Team Meetings	Included	Included
b. Classifying Findings	Included	Included
c. Daily Feedback Meetings	Included	Included
5. Evaluating Effectiveness	Included	Included
a. Audit Conclusions	Included	Included
b. Evaluating Effectiveness	Included	Included
6. The Closing Meeting	Included	Included
a. Conducting the Closing Meeting	Included	Included
b. Closing Meeting – Example Agenda	Included	Included
c. Conducting a Closing Meeting – Exercise	Included	---
V: Software Audit Reporting	**Software Auditing**	**Software Auditor Skills**
1. Audit Report	Included	Included
a. Audit Reporting Step	Included	Included
b. Turning Requirements into Audit Results	Included	Included
c. Audit Report	Included	Included
2. Audit Record Retention	Included	Included
a. Complete Checklists	Included	Included
b. Audit Records	Included	Included
c. Record Retention	Included	Included

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VI: Corrective Action & Follow-Up	Software Auditing	Software Auditor Skills
1. Corrective Action	Included	Included
a. Audit Corrective Action & Verification Follow-Up Step	Included	Included
b. Corrective Action	Included	Included
c. Corrective Action Plan	Included	Included
d. Evaluating Corrective Actions	Included	Included
e. Evaluating a Corrective Action Plan – Case Study Exercise	Included	---
2. Verification Follow-up	Included	Included
VII: Audit Program Management	**Software Auditing**	**Software Auditor Skills**
1. Audit Program Administration	Included	---
a. Audit Program Objectives	Included	---
b. Long-Term Audit Planning	Included	Summarized in Chapter 1
c. Resource Requirements	Included	---
d. Linkage to Business Performance	Included	---
e. Linkage to Process Improvement	Included	---
f. Evaluation of Audit Program Effectiveness	Included	---
g. Factors Affecting Audit Quality	Included	---
2. Software Audit Process	Included	---
a. Audit Program Procedures	Included	---
b. Audit Program Schedule	Included	---
c. Audit Record Keeping	Included	---
3. Audit Personnel	Included	---
a. Qualifications	Included	---
b. Selection	Included	---
c. Training	Included	---
d. Performance Evaluation	Included	---

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