

Training Courses Fiscal Year 2015:

1 - Using Data Analysis to Detect Fraud & Error

Instructor: Scott Langlinais – Courtney Thompson & Associates

[http://www.ctassoc.com/Scott Langlinais Profile](http://www.ctassoc.com/Scott_Langlinais_Profile)

Date: October 28, 2014

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$160.00 (early payment) if payment is received prior to October 13th / \$180 if payment is received October 13th or later.

CPE: 8 hours

Overview:

Today's technology, from massive ERP systems to legacy systems spotted around the globe, can hide symptoms of fraud and waste from auditors and control personnel. This tactical one-day session delves into specific methods for auditors, investigators, and finance professionals using data analysis software. This is not a course about which buttons to click. Rather, you will see numerous results demonstrating how data analysis techniques highlight symptoms of frauds across all processes, regardless of the software tool you use. Data analysis techniques, when combined with traditional, manual detection methods, create the most efficient and effective opportunities for cost recoveries, discovery of missing revenues, and detection of fraud, waste, and abuse.

Basic Concepts:

- The role of belief, and overcoming beliefs that hinder our ability to achieve results
- Data analysis self-assessment
- Understanding who really steals
- Avoiding the five dangers of fraud
- Defining the most damaging types of fraud
- The five-step approach to fraud detection
- Evolving from random samples to targeting indicators of fraud, waste, and abuse

Fundamental Data Analysis Techniques:

- Using control totals and basic footing to detect manipulation of reconciliations and spreadsheets
- Sorting data to highlight key missing fields, stale transactions, odd dates, and unusually large / small items
- Analyzing field statistics to detect unusual balances such as negative entries and posts in the middle of the night
- Common errors in data analysis
- Summarizing data to detect curious patterns
- Extracting round sum entries and weekend transactions, and using embedded functions to highlight anomalies
- Principles of effective charting

- Searching for unusual descriptors symptomatic of earnings management, bribes, and kickbacks
- Knowing your data
- Exercise: application of fundamental techniques to case studies

Beyond Fundamentals:

- Locating clusters of symptoms
- Effective uses of field manipulation
- Searching for duplicate entries
- Date stratification to detect spikes in activity around a period end, symptomatic of earnings management
- Numeric stratification and the circumvention of approval authority
- Joining separate databases to detect false vendors, ghosts on the payroll, and revenue loss
- Comparing databases to extract escalating activity over several periods, symptomatic of false vendors, cash misappropriation, and black hole accounts
- Benford's Law and its application
- Exercise: application of data analysis to your own environment

Course Link:

<http://www.ctassoc.com/DataMining>

2 – Addressing Government Corruption and Conflict of Interests

Instructor: Scott Langlinais – Courtney Thompson & Associates

[http://www.ctassoc.com/Scott Langlinais Profile](http://www.ctassoc.com/Scott_Langlinais_Profile)

Date: October 29, 2014

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$160.00 (early payment) if payment is received prior to October 14th / \$180 if payment is received October 14th or later.

CPE: 8 hours

Overview:

The news media is overflowing with tales of corruption. Too often matters go unaddressed until they become too big and obvious to ignore or until embarrassing questions are asked. What is going on? How can our systems fail us? How can leaders fail to notice the obvious? How can stewards of government assets tolerate theft by their colleagues, or worse, enrich themselves improperly?

This course will explore corruption, how it happens and what some have done to change their cultures to reduce corruption and conflict of interests. The course will include methods for detecting corruption within your environment and factors that can protect against corruption. It will include lessons from around the world in construction, IT and other contracting.

Topics covered include:

- Challenges and dangers in addressing corruption

- Assessing your environment
- Myths and reality about conflicts of interest
- Gift and entertainment practices and fallacies
- Why corruption and conflict of interests go undetected
- Understanding fraud and corruption in contracts and grants
- Kickbacks, bribery and influence peddling
- Applying a five-step approach for detection to corruption and kickbacks

Course Link:

N/A

3 – Quality Assessments – Performing Self Assessment with Independent Validation (SAIV)

Instructor: Larry Hubbard – Larry Hubbard & Associates

<http://www.lhubbard.com/about.htm>

Date: December 4, 2014 – December 5, 2014

Location: James Monroe Building
23rd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$320.00 (early payment) if payment is received prior to November 19th / \$340 if payment is received November 19th or later.

CPE: 16 hours

Overview:

This class will benefit audit shop compliance with the IIA standards, specifically the IIA Standard 1312 requirement. IIA Standard 1312 requires that: **“External assessments must be conducted at least once every five years by a qualified, independent reviewer or review team from outside the organization.”**

Without this external review, an audit department cannot say their work is performed in compliance with the Standards.

While, being able to provide the assurance that your audit department is in compliance with the IIA Standards, may not be required, it has the benefit of strengthening the weight and value of agency audit results. In addition, following the IIA’s Standards provide structure that assist audit departments perform their work. As part of the Standard, the external review is necessary:

This class will assist with:

- Learning more about Best Practices in Internal Auditing
- Taking independent, fresh look at your own practices
- Increasing your knowledge of the most widely accepted internal auditing standards in the world
- Assuring your board that you follow widely accepted auditing standards
- The pride of doing something most top-notch internal auditing departments do.

The IIA sells a Quality Assessment Manual that gives details, formats and guidelines for external assessments to help departments prepare and perform QA's. Using that QA Manual, a traditional external assessment can take a week or two to complete, and involve extensive preparation work by the audit department.

The IIA's Quality Audit Services department and many other organizations provide this service for a fee. Complying with Standard 1312 using a full external review can be expensive, often upwards of \$25,000 USD. Another approach, the Self-Assessment with Independent Validation (SAIV), can be much less expensive, and some people believe the SAIV is actually a better approach achieving the Standard. Practice Advisory 1312-2 External Assessment – Self Assessment with Independent Validation outlines this approach.

This training seminar covers both QA approaches (full QA and SAIV), the required knowledge of the Standards to perform the reviews, and full coverage of using The IIA's current Quality Assessment Manual.

Topics covered include:

- The IPPF
- Quality Assurance and Improvement Programs (QAIP)
- Conducting a QA
- Conducting Self-Assessments
- Other Knowledge Needed to Perform QA's
- Reporting QA Results
- QA Mistakes

Class Outline:

1. The IPPF
 - The Structure
 - The QAIP Standards – Overview
 - Framework Challenge - Exercise
2. Quality Assurance and Improvement Programs (QAIP)
 - Internal Assessments
 - External Assessments - QA Options
 - The IIA QA Manual and Opinion Levels
 - Flow of QA Process
 - Developing a QA Audit Program
3. Conducting a QA
 - Common Issues and Leading Practices and Typical QA Opinions
 - Other Best Practices and Tips
 - Maturity Models
 - Standards Conformance Evaluation Summary
 - QAR Scenarios – Exercise
4. Conducting a Self-Assessment with Independent Validation
 - Full QA and SAIV Differences and Similarities
 - SAIV and the Periodic Internal Review
 - Selecting an Independent Validator
 - Working with the Validator
5. Other Knowledge Needed

- Risk Clarity
 - COSO Framework
 - Fraud Responsibilities
 - Sampling Concepts
6. Wrap-up
- Reporting QA Results
 - The QA Mistakes
 - Specific Suggestions
 - Final Exam

Materials:

Course materials are contained in a participant workbook. A copy of the IIA Standards will be included. Participants may want to separately purchase and bring The IIA Quality Assessment Manual, as that Manual is not supplied as part of the course. The IIA QA Manual is **not** required to complete the course.

Administration:

No advance preparation or prerequisites are necessary for this course. The program level is basic. The delivery method is Group-Live and 16 CPE hours in the Auditing field of study are available.

Course Link:

<http://www.lhubbard.com/Outlines/QAR.pdf>

4– Assessing Application Security Controls

Instructor: David Cole – SysAudits

<http://www.sysaudits.com/>

Date: January 8, 2014 – January 9, 2014

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$320.00 (early payment) if payment is received prior to December 24th / \$340 if payment is received December 24th or later.

CPE: 16 hours

General Overview:

Seminar covers aspects of a business application security control review. Also includes IT general control and application controls. The class will provide information to prepare and execute an application control audit review. The class will include specific situations and discuss audit steps for IT General Controls review and Application Controls review as follows:

General Controls

- A general controls review attempts to gain an overall impression of the controls that are present in the environment surrounding the information systems.

- Further the IS auditors also should review the overall access control measures to the entire facility for controls like security guards at the entry gates, displaying of identification badges and logging visitor access.
- Application software is the software that processes business transactions.
- The application software could be a payroll system, a retail banking system, an inventory system, a billing system or, possibly, an integrated ERP (enterprise resource planning) system.
- Most users interact with the computer systems only through the application software.
- It is very important to subject application software to a thorough audit because the business processes and transactions involving money, material and services flow through the application software package.
- The first question to ask in an application software review is, "What does the application software do; what business function or activity does it perform?" For application reviews, the IS auditor's knowledge of the intricacies of the business is as important, if not more so, as the technical knowledge.
- Hence the first step in an application review is to understand the business function/activity that the software serves.
- Once this is done, it is necessary to identify the potential risks associated with the business activity/ function served by the application (what can go wrong?) and to see how these risks are handled by the software (what controls it?).
- The information systems audit of application software should mainly cover the following areas: Verify access control in application software.
- Every application software has a number of modules/ options/ menus that cater to the different functionality provided by the software.
- The IS auditor should review the design of the access control module keeping in mind the criticality of the functions/ actions possible in the software and evaluate whether the design provides the level of control and granularity to selectively and strictly allows access as per the job requirements of all the users.
- Having done this, the auditor should proceed to verify whether all existing users have appropriate access as evidenced by their job descriptions and whether access to certain critical activities are allowed only to select personnel duly authorized.
- Correct any weaknesses found at the end of an applications review in the software that could lead to errors or compromises in security.
- Generally, it is prudent to conduct a security review of the operating system and the database in which the application runs while doing an application review.

Application Controls

- Application controls are those controls that pertain to the scope of individual business processes or application systems, including data edits, separation of business functions, balancing of processing totals, transaction logging, and error reporting.
- Therefore, the objective of application controls is to ensure that:
 - Input data is accurate, complete, authorized, and correct.
- These include:
 - Input Controls – These controls are used mainly to check the integrity of data entered into a business application, whether the data is entered directly by staff, remotely by a business partner, or through a Web-enabled application or interface.

- Integrity Controls – These controls monitor data being processed and in storage to ensure it remains consistent and correct.
 - Management Trail – Processing history controls, often referred to as an audit trail, enables management to identify the transactions and events they record by tracking transactions from their source to their output and by tracing backward.
 - Output Controls – These controls address what is done with the data and should compare output results with the intended result by checking the output against the input.
 - Processing Controls – These controls provide an automated means to ensure processing is complete, accurate, and authorized.
 - A record is maintained to track the process of data from input to storage and to the eventual output.
- These controls also monitor the effectiveness of other controls and identify errors as close as possible to their sources.
 - Data input is checked to ensure that it remains within specified parameters.
 - 4 Several types of application controls exist.
 - Data stored is accurate and complete.
 - Data is processed as intended in an acceptable time period.

Basic Training Concept/Outline

1. Introduction to Business Application Systems

- objectives of an application audit
- types of applications audits

2. Application Controls

- business applications
- application transaction life cycle
- logical security
- completeness and accuracy of input
- completeness and accuracy of processing
- completeness and accuracy of output
- output retention and disposal
- data file controls
- segregation of duties

3. IT General Control Objectives and Risks

- IT general controls overview
- relationship between IT general controls and application controls
- COBIT™ and ISO-27002
- physical security
- environmental exposures
- logical security
- encryption
- systems development
- production change management

- disaster recovery and business continuity planning
- Sarbanes-Oxley IT general control requirements

4. Testing Application Controls

- testing automated and manual controls
- testing alternatives
- testing sample size
- sampling terminology
- negative assurance testing
- types of audit evidence
- functional/substantive testing
- computer assisted audit techniques (CAATs)
- data analysis: planning and data verification
- Sarbanes-Oxley: testing requirements and examples

5. Documenting Application Controls

- evaluating and documenting internal controls
- internal control questionnaires
- flowcharts / process flows
- control matrix

6. Auditing System Development Projects

- business risks
- audit's primary goals
- rapid application development
- advantages and challenges
- assess project and product risks

7. Executing Application Audits

- objectives of an application audit
- application audit planning and risk assessment
- audit scope and audit programs

Materials:

Soft files will be provided prior to scheduled course. These materials will be developed as part of the class development.

Instruction Method:

Briefings, case studies, exercises and discussions

Update:

This course is being developed with the assistance of three experienced IT auditors and the above overview is expected to change to the benefit of the intended audience.

Course Link:

N/A

5– Contract Auditing

Instructor: Danny Goldberg – GoldCal LLC

<http://goldsrd.com/content/bio>

Date: January 22, 2015

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$160.00 (early payment) if payment is received prior to January 7th / \$180 if payment is received January 7th or later.

CPE: 8 hours

Note:

This course is being developed with the assistance of three experienced procurement/contract management auditors and investigators. This class will be beneficial to audit, procurement, contract management and investigative staff who have contract management responsibilities and audit /investigative responsibility.

General Overview:

Contracts and contracting is a way of life for governmental agencies. We rely on third parties more than ever in areas such as consulting, technology, security, maintenance, construction, joint ventures, advertising, and outsourcing agency service requirements. With the increased reliance on contracts/third parties has come the increased risk exposure. Contract stewards, audit and investigation must take an active role in auditing contracts to verify compliance and keep cots in check.

Course Objectives:

- Overview of general best practices throughout the contract auditing process and comparison to what attendees are currently applying in their organization
- Understanding of the contracting process and key areas and risks
- How to write and effectively communicate contract auditing issues
- Case Studies related to contract issues

Topics covered include *(subject to change based on class development):*

1. Contract Overview
 - Understanding the basic contracting process
 - Common issues in contracting and issues in auditing contracts
2. Exposures and Opportunities
 - Key elements of the contracting process
 - Contract components – what and why
 - Exposures in contracting
 - Contract audit findings
3. Basics of Contract Auditing
 - Contract audit objectives and strategy
 - Audit Planning and Assessing Risk

- Developing a Contact Audit Program/Checklist
- 4. Fraud Considerations
 - Key areas of fraud risk
 - Common cost exceptions and how to find them
- 5. Auditing Costs
 - Relevant costs
 - Cost exceptions
 - Identifying cost exceptions
- 6. Leading Audit Practices
 - Tools and Procedures
 - Leveraging technology in contract auditing
 - Building a Leading Practice Contract Template

Update:

This course is being developed with the assistance of individuals with procurement and contract management experience, and the above overview is expected to change to the benefit of the intended audience.

Course Link:

N/A

6 – Best Practices in Internal Auditing

Instructor: Larry Hubbard – Larry Hubbard & Associates

<http://www.lhubbard.com/about.htm>

Date: March 10, 2015

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$160.00 (early payment) if payment is received prior to February 23rd / \$180 if payment is received February 23rd or later.

CPE: 8 hours

Overview:

This one-day course presents ten specific practices that world-class internal auditors are using to serve their clients. You can implement any of them starting tomorrow to dramatically change and improve your audit department.

Course Objectives:

- To learn about relevant best practices
- To compare your own department to those best practices
- Develop an action plan to implement specific best practices

Course Modules:

- The Top Ten
 1. Management action plans
 2. Residual risk matrix
 3. Linking findings to a framework
 4. Using a control framework
 5. Automating the process
 6. Integrated GRC
 7. Self-assessment
 8. Sharing resources
 9. Balanced scorecard measurements
 10. Post audit feedback
- Other best practices
- Comparing yourself to best practices
- Implementation planning

Administration:

No advance preparation or prerequisites are necessary for this course. The program level is basic. The delivery method is Group-Live.

Course Link:

<http://www.lhubbard.com/Outlines/Best-Practices-in-IA.pdf>

7 – Web Security

Instructor: Randy Marchany – Virginia Tech

https://security.vt.edu/randy_marchany.html

Date: April 28, 2015

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$40.00

CPE: 8 hours

This is the course to take to better understand IT risk related to web applications!

Note:

Randy is developing this course. The class will focus on how individuals are able to gain unauthorized access into computer systems. This class is designed for Virginia government and Virginia higher education IT professionals and IT auditors.

Overview:

We are relying more and more on web based applications without fully understanding the risk based impact to our IT environment. Traditional network defenses, such as firewalls, fail to secure web applications. The quantity and importance of data entrusted to web applications is

growing, and auditors need to learn how to ensure the data is secure. This class is intended to be designed to help you better understand web application vulnerabilities, thus enabling you to properly audit your organization's web assets.

Reminder:

This course is being developed with the state agency and higher education needs in mind, and the above overview is expected to change to the benefit of the intended audience.

Course Link:

N/A

8 – State Updates

Instructor: Various Individuals from State Government

Date: May 20, 2015

Location: James Monroe Building
22nd Floor Conference Room

Address: 101 N. Franklin Street,
Richmond, VA 23219

Pricing Terms: \$0.00

CPE: 8 hours

Reserved for Government Employees impacted by changes to State Policy

Note:

This class will have speakers from various state agencies such as OSIG, DOA, DGS, VITA as well as APA talking about important matters or changes that could affect other state agencies.