

IACA Certification Exam Study Guide

By Skill Set

This study guide is to be used as a supplement to materials used in preparing for the IACA Certification Exam. It is not meant to be the sole study tool for the exam. Questions on the exam may be worded differently than concepts provided in this study guide. This study guide is not all-inclusive and only provides general concepts that are covered on the exam. This study guide should also be used in combination with other references in addition to the second edition of IACA's *Exploring Crime Analysis* book.

Knowledge of Crime Analysis Basics

- History of crime analysis
- Classifications of law enforcement analysis
- Classifications of crime analysis
- Crime series, crime patterns, crime trends
- Crime analysis process
- Methods of analysis
- Strategy development

Evaluate the Integrity of Information

- Data errors
- Data cleaning
- Search and replace operations
- Parsing and concatenation
- Metadata
- Alias tables

Knowledge of Criminal Behavior

- Elements of a crime
- Criminal Event Perspective
- Routine Activity Theory
- Modus operandi
- Signature
- Method of approach and attack
- Series profile
- Geographic profiling and environmental criminology
- Spatial characteristics of criminal events

Understand the Criminal Justice System

- *Ex post facto*
- Fourth Amendment to the U.S. Constitution
- System models
- Stages of the criminal justice system
- Role, function and types of courts
- Purpose, models and types of corrections
- Types of sentencing
- Probable cause

Conduct Temporal Analysis

- Measuring time
- Tempo
- Sequential analysis
- Frequency analysis
- Midpoint method
- Weighted method

Use Descriptive Statistics

- Levels of measurement
- Frequency distribution
- Measures of central tendency
- Percentages
- Skewness
- Standard deviation
- Rates
- Percent change
- Correlation analysis

Use Inferential Statistics

- Purpose of statistical inference
- Types of sampling
- Sampling designs
- Level of significance
- Confidence intervals
- Null hypothesis

Conduct Demographic Analysis

- Correlates of crime
- Age, gender and socio-economic factors
- U.S. Census Bureau data collection measures

- Census Bureau geographic statistical subdivisions
- Bureau of Justice Statistics data

Interpret Crime Statistics

- Primary data sources
- Police data systems
- Uniform Crime Reporting (UCR)
- National Incident Based Reporting Systems (NIBRS)
- National Crime Victimization Survey
- Calls for service data
- Rates
- Correlation
- Statistical significance

Spatial Analysis

- Cartography
- Geographic information system (GIS)
- Geocoding
- Map projection
- Coordinate systems
- Spatial data models
- Thematic mapping
- Hot spots
- Distance decay

Investigative/Intelligence Analysis Charting

- Intelligence-led policing
- Link chart purpose and structure
- Simple charts (e.g., bar, pie)
- Timelines
- Organizational charts
- Commodity flow charts
- Event flow analysis
- Phone toll analysis
- Final products/publications

Reading Comprehension

- Literature reviews
- Annotated bibliography
- Abstracts databases
- Academic journals vs. other publications

- Online resources for crime analysts
- Government resources for crime analysts
- Basics of citing sources

Writing Expository Narratives

- Expository writing
- Analytical writing
- Objectivity
- Identification of audience
- Determining relevant information
- Abstract and concrete terms
- General and specific terms
- Executive summaries
- Analytical outlines

Making Effective Presentations

- Appropriate presentation styles for various settings
- Components of effective and ineffective presentations
- Presentation planning
- Effective use of technology
- Style and form in PowerPoint presentations
- Ice breakers

Word Processing Skills

- Types of crime analysis publications
- Creating useful crime bulletins
- Basics of style and voice in publications
- Creating electronic publications

Spreadsheet Operations

- Cellular reference systems
- Data storage
- Charting
- Crime analysis formulas
- Macros

Internet / Intranet Skills

- URLs
- Web-based training
- Visible versus invisible web
- Search engines

- Listservs
- Law enforcement websites
- ISPs
- Intranets
- Hyperlinks
- Citing online references

Applied Research Methods in Crime Analysis

- Opportunity Theory
- Situational Crime Prevention
- Displacement and diffusion of benefits
- Long-term trend analysis
- Data collection
- Environmental surveys
- SARA

Evaluation of Qualitative Information

- Qualitative Analysis
- Problem-Oriented Policing
- Spelman & Eck publications from 1987
- Sources of qualitative information
- Major findings of *Code of the Street*
- Qualitative research methods
- Inductive model
- Deductive model
- Open-ended vs. closed-ended questions

Critical Thinking Skills

- Types of reasoning
- Elements of reasoning
- Reasoning fallacies
- Creativity
- Problem solving
- Metacognition