

Association of Internet Research Specialists

# CIRS® Examination Syllabus

Spring 2016 Ver. 1.0

# SYLLABUS

**CERTIFIED INTERNET RESEARCH SPECIALIST**



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# CIRS® Syllabus

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## NETWORKS & INTERNET TECHNOLOGY – CIRS® Exam Module I

### Course Objective

The online researcher will gain knowledge and understanding of how the Internet connect and work. They will learn the fundamentals of electronic information transfers and communications. An online researcher uses web browsers as a basic tool with complex functions; it is important that they know its basic working and how it gets the final product from information resource.

### Questions Addressed

- What makes an Internet?
- What makes a Network? And how do they communicate with each other?
- Where does the Information reside and in what form it exists?
- What is a Web Browser and how does it work?
- What is a Search Engine? And how does it work?
- Why is a Search Engine different from a Browser?
- What are Web Application and Web Pages? And what is the technology that makes them work?

## Concept Discussion

On completion of this module you should be able to connect, correlate and comprehend the basic concepts of:

- The Networks and Internet Data Communications.
- The Web Applications and Remote Web Servers in Client and Server Arrangements.
- Web Pages Storage and Indexing.
- Search and Retrieval of Web Pages by Search Engines.
- Browser Technology and their Differentiation with Search Engines.

## Learning Advantages

- Makes it easier to understand the technical terminology often used when reading about Internet technology.
- Helps to better understand the science of Internet and networks, the search engines and browsers. Consequently, the researcher can better strategize online research work. They are well equipped with sufficient technology knowledge to understand search engines behavioral changes and query response.
- Learning data communications and information flows prepares researcher to easily interpret the relationships between data, information and search engines.

## CIRS® Exam Module I - TABLE OF CONTENT

### THE NETWORKS

#### Networks & Networking

- Type of Networks
- Local Area Network (LAN)
- Wide Area Network (WAN)
- Other Types of Area Networks
  - Wireless Local Area Network
  - Metropolitan Area Network
  - Campus Area Network
  - Storage Area Network
  - System Area Network
- Network Devices
  - A PC's or Workstations or Clients
  - The Central Servers
  - A Router
    - The Many Functions of a Router
  - The Hub
  - A Switch
  - An Access Point
  - A Network Card (NIC)
  - The Network Servers
  - A *Workstation/Clients* (E.g. PC's, Laptops, Terminals in a Network)
  - A Server
- Network Connectivity
  - The OSI Model
    - Application Layer

- TCP Layer
- IP Layer
- Hardware layer
- The OSI Model Illustration of Data Communication

### **The Web Applications**

- Computer Software's Programs
  - The Operating Systems (OS) or (or System Software)
  - The Desktop Programs, Native Programs or Local Program
  - Mobile Application
  - A Web Based Applications
- Website Development Program Languages
  - Static Programming Language
  - Dynamic Programming Language
- The Database
  - Database Indexing
  - The Website on Internet
- Registering Domain Names
- Web Hosting Platform (ISP Services)

## **THE INTERNET**

### **Internet Connectivity**

#### **Web Pages and URL Links**

#### **A Domain Name**

#### **Domain Names Suffix Example**

- The Web Page
- The Web Page Links (URL)

#### **Browser & Search Engine**

- Web Browser and Search Engines Differentiation

### **The Web Browser**

- Why create web browser?
- Browser Engine Technology
- The Working Components of a Browser

### **The Search Engine**

- The Process of Web Search

### **The Web Crawlers**

### **Indexing of Web Pages**

### **Search Algorithms**

- The Content “Freshness”
- The Content “Quality”
- The Content “Reliability”
- The Content “Relevance”
- The “Links Popularity”
- The Spam and Malware Protection
- The “Dead Links” Filtering
- The Spell Checks and Synonyms Match
- Predictive Search
- Localized Search

### **Search Engine Selection**

### **Types of Search Engines**

- Crawler (Google)
- Meta-Crawlers
- Directory (Open Directory Project like DMOZ.com)
- Vertical (Like Quora.com)
- Sponsored (Kanoodle.com)
- Hybrid (Yahoo!)
- Other Specialized Search Engines

## RESEARCH METHODS and ONLINE RESEARCH – CIRS® Exam Module II

### Course Objective

This module is split into two sections.

- The Research Methods; and
- Internet Research.

The Research Methods includes fundamentals of conventional research. The approach explained in this section covers the industry's research standards, conventions and methods practiced today by research practitioners. This is an area where the research specialists learn different approaches towards research – They are advised on how to handle research projects and to organize and interpret research results.

The Internet Research is considered a core section for the CIRS examination and carries a higher weightage in terms of exam questions. The syllabus on this section identifies the challenges of digital information era and explains the techniques and approach to accessing information from the Internet. It provides insight into search engine behavior and responses. Students will find useful techniques, methods and approach to find, organize and filter web content/information.

The online researcher will gain knowledge and understanding of how the Internets connect and work. They will learn the fundamentals of electronic information transfers and communications. An online researcher uses web browsers as a basic tool with complex functions; it is important that they know its basic working and how it gets the final product from information resource.

### Questions Addressed

- What is involved in research?



- What are the tried and tested conventional research techniques and methods?
- What are the practiced research methods and industry standards?
- How to organize and conclude any research project?
- How to find most reliable, relevant and on time information on the Internet?
- How to select keywords and build effective search queries?
- What are the different types of search engines and which ones to use and when to use them?
- How to search through Blogs, Forums, Videos, and Social Media.

## Concept Discussion

On completion of this module you should have a sound concept of performing professional research work, specially, finding of information on the Internet should be approached in an efficient manner with conceptual understanding of these topics:

- Research Types, Classification, Research Methodologies and Philosophies.
- Planning and Execution of Research Work
- Information Sourcing, Organization and Reporting
- Identification of Data Type, Data Sampling Methods, Analysis and Classification.
- Internet Research Challenges, Methods, Techniques and Processes.
- Types of Search Engines and their Usefulness.
- Search Engine Tools, Utilities and Specialized Search Applications.
- Performing Search with Social Media, Blogs, Forums, Video Files and through Web Portals.

## Learning Advantages

- A complete understanding of how to perform research professionally.
- Introduction to research industry standards, recognized methods and conventions.
- A rich understanding of performing Internet Research effectively, efficiently and accurately.

## CIRS® Exam Module II - TABLE OF CONTENT

### RESEARCH METHODS

#### Profession of Research

- Meaning of Research
- Purpose of Research
- Research Areas by Industry
  - Research Services as a Business
    - Forrester Research
    - IDC Research
    - Northern light
  - The Corporate Enterprise & SMB's
  - Academic Research
    - The Art Disciplines
    - The Science Disciplines
    - The Discipline of Philosophy
    - The Discipline of History
    - The Disciplines of Humanities
  - Scientific Research
- Areas of Research by Subject
  - Business Competitive Intelligence (BCI)
  - Company Research
  - Accounting and Financial Research
  - Market and Industry Research
  - Investigative Research
  - Legal Research
  - Technology Research
  - Business Reports
    - Business Feasibility

- Investment Feasibility (Financial Feasibility)
- Product & Price Analysis
- SWOT Analysis

### **Types of Research**

- Research Based on Purpose
  - Exploratory Research
  - Descriptive Research
  - Explanatory or Analytical Research
  - Predictive research
- Research Based on Process or Approach
  - Quantitative Approach
  - Qualitative Approach
  - Correlation/Regression Analysis
  - Meta-Analysis
- Research Based on Outcome
  - Applied and Basic (Pure) Approach
  - Deductive and Inductive Approach
- Research Philosophies
  - Positivism
  - Interpretivism (Phenomenological)
- Research Methodologies
  - Methodologies Associated with Positivism
    - Surveys
    - Experimental Studies
    - Longitudinal Studies
    - Cross-sectional Studies
  - Methodologies Associated with Interpretivism
    - Case Studies
    - Action Research
    - Ethnography (participant observation)

- Participative Enquiry
- Feminist Perspectives
- Grounded Theory

## **THE RESEARCH WORK**

### **Introduction - Work of Research**

- Building Understanding from a Clients Perspective
- Scoping of Research Assignment
- Defining a Research Topic
- Identify Research Problem
- Identifying Primary Audience
- Classify Type of Data Required & Data Sampling
  - Primary Source
  - Secondary Source
    - Printed media
    - Electronic media
  - A More Granular Classification of Data
    - Discrete Data
    - Ordinal Data
    - Continuous Data
    - Nominal Data
    - Interval Data
    - Ratio Data
- Establish Data Sampling Criteria & Methods
  - Data Sampling Strategies
    - Probability Sampling
      - Probability Sampling Techniques
        - Simple Random Sampling
        - Stratified Sampling
        - Systematic Sampling
        - Cluster Sampling

- Multi-Stage Sampling
- Multi-Phase Sampling
- Non Probability Sampling
  - Non-probability Sampling Techniques
    - Convenience Oriented Sampling
    - Purposive Sampling
    - Quota Based Sampling
    - Snowballing Sampling
    - Volunteered Sampling
- ☐ Identify Information Resources
  - The Print Resources
    - Books
      - General Books
      - Reference books
      - Periodicals
      - Scholarly journals
      - Peer-Reviews
      - Newspapers
    - Electronic Media
- ☐ Planning Information Sourcing Method
  - Assessing Information Gathering Difficulty Levels
  - Information Access Planning
  - Factors that Influence Data Collection Methods
  - Evaluate Best Methods of Data Collection
    - Quantitative Methods
    - Qualitative Methods
- ☐ Establish Information Reliability Criteria
  - Credentials of the Author
  - Footnotes and Bibliography
  - Observing the Objectivity and Accuracy of a Website
  - Check for the Logical Consistency in the Material/Content

- Perform Information Evaluation
  - Ability to Access Information
  - Relevance of Information
  - Reliability of Information
  - Timeliness of Information
  - Future impact
  - The Risk & Sensitivity of Information
  - Paid vs. Free Information
  - Time Sensitive Information Assessment
- Project Data Analysis
- Report of Data Analysis, Interpretation and Deriving Conclusions
  - Data Analysis Techniques
    - Analyzing Quantitative Data
      - Statistical Methods of Quantitative Data Analysis
        - Measures of Central Tendency - Mean, Mode, Median
        - Proportionate Percentages Measurement
        - Events and Data Frequency Measurement
        - Measures of Variability/Deviation
      - The Types of Data Analysis in Quantitative Research
        - Univariate Analysis
        - Bivariate Analysis
        - Multivariate Analysis
      - Analyzing Qualitative Data
        - Analytic induction
        - Grounded theory
- Deriving Inferences and Interpreting Research Results
- Drawing Conclusions and Project Final Deliverables

## **INTERNET RESEARCH**

### **INTRODUCTION TO INTERNET RESEARCH**

- Advantage of Using Internet for Research

- Large Data Samples Available
- Facilitates Social Science Research
- Ease of Automated Testing & Experimentation
- High Availability to Information Resource
- Dynamic Updates
- Fills-in the Gap of Library Information Source
- Easy to Obtain Larger Sample/Polls
- Types of Internet Surveys, Sampling, Trials and Experiments
  - Web Polls/Online Surveys
  - Online interviews
  - Online (virtual) Focus Group Discussions (FGDs)
  - Online (virtual) ethnography
  - Online clinical trials
  - Web-based experiments (Internet experiments)
  - Internet Surveys and Samplings Advantages and Disadvantages
    - Internet Surveys Advantages
      - Cost Effectiveness
      - Automation and Real-Time Access
      - Conserves Time and Effort
      - Convenience for Respondents
      - Design Flexibility
      - No Interviewer
    - Internet Survey Disadvantages
      - Limited Sampling and Respondent Availability
      - Possible Cooperation Problems
      - No Live Interviewer Required
- Internet Research Challenges
  - Easy and Fast Communication (“Haste Makes Waste”)
  - Information Time Lines
  - Information Context
  - Predictive Technology in Search Engines

- Multicultural and Language Barriers
- Region Specific Default Browsing
- The Net Neutrality
- Complex Legal Issues
- Cyber Vandalism and Online Information Sabotage
  - Corporate Advertisements
  - Tabloids and Magazine Sites
  - Religious Beliefs
  - Political Material
  - News Media
  - Propaganda Groups
  - Technology Misuse
  - False Reviews
  - Raves and Rants
  - False Surveys and Polls
  - Self-entitlement of opinions
  - Consequence of Rapid Internet Spread
  - Social Media and Information Sabotage
  - Ghost Writers on Internet Forums
  - Data generalizability with Internet research
  - Legal Implications in Internet Research
    - Protection of Human Subjects
    - Potential Risk for Participants in Internet Research
    - Question of Informed Consent
- ☐ Online Information Sourcing
  - Free Information
    - Types of Public Licenses
      - Authored Content
        - Creative Commons
      - Software Use (Open Source Software)
        - GNU and GPL (General Public License)



- LGPL (Lesser General Public License)
- BSD License
- Sourcing of Free Information on the Internet
  - Free Information Drivers
    - Search Engine Revenue
      - Illusions of Sponsored Ads by Search Engine
        - Illegible “Sponsored Ad” Notations
        - Misleading “Headlines” and “Captions” of Sponsored Ads
        - Layout Blending Tactics
        - Leading or Driving Ads
      - Methods to Block Sponsored Advertisements
        - Google Ads Control Options
        - Ad Controls in MICROSOFT BING
    - Categorizing Free Information of the Internet
      - Information Categorized by Source
        - Statistics and Opinions Websites
        - Statistical Data Web Sites
          - Primary Data Resources
          - Secondary Data Resources
        - International Organizations
        - Inter-Governmental Organizations (IGO)
        - Government Gateways or Government Resources
        - Regional Data Collection Divide and Hierarchy of Government Collaborations
        - Regional Cooperation [North America – USA, Canada and Mexico]
        - Government Departments
          - USA (<http://www.census.gov/>)
          - CANADA (<http://www.statcan.gc.ca/>)
        - Third World Countries Census Reliability Issues [Case Illustrated]
        - Non-Profit Agencies
          - Sectors Covered by NGO’s
        - Market Research Agencies

- Online Automated Data Collectors (“Bots Software.”)
  - Information from Public Records
  - People Search
  - Archives of Digital Information
  - Public Reviews Web Sites
    - Business to Consumer (B2C) & Business to Business Reviews (B2B)
  - Product Reviews by Specialists
  - Computational Calculations and Knowledge
  - Top Virtual E-Markets for E-Commerce & Product Price Determination
  - Web Directories
  - Flavors of Wiki
  - Biography’s Other Than Wiki
  - Free Online Libraries (Books, Journals, Magazines, Research Papers)
- Information of the “Deep Web”
- The Network Level Security
  - A Web Application Level Security
  - Private Networks Security Level
    - Guest Registration
    - Subscriptions (Paid or Free) Websites
    - Membership Websites (Paid, Honorary or Free)
      - Standard Membership Benefits
  - The “Dark Web”
  - The Deep Web Search Tools and TOR
    - More about TOR and its users
      - Normal people use Tor
      - Journalists and their audience use Tor
      - Law enforcement officers use Tor
      - Activists & Whistleblowers use Tor
      - High & low profile people use Tor
      - Business executives use Tor
      - Bloggers use Tor

- Militaries use Tor
- IT Professionals use Tor
- Virtual Private Networks (VPN)
- ☐ Fine Tuning Internet Search
  - The Concept of “Internet Search Tagging.” (or Internet Bubble)
    - Tracking Cookies and Cache
    - Standardizing Search Results
      - Select Browser
      - Fine Tune Browser using “Tools and Settings.”
        - Google Chrome Preferred Settings for Research
  - The Main Search Engine Types
    - Mainstream Search Engines (Core Search Engines)
    - Specialized Search Engines
      - News Search Engines
        - Type I > Meta Crawlers [Processed News via News Aggregator Search Engines]
        - Type II > Top International News Agencies Web Portals (Source of Direct News)
      - Journals & Articles Search Engines
      - Open Library Search Engines
      - General Blogs Search Engines
      - Subject Blog Search
      - Social Media Search Engines
      - Format Specific Search Engines
        - The Image Search Engines
        - Types of Image Search - Search Engines
          - Keyword Searchable
          - Search by Example (or reverse image search)
          - A Hybrid Searchable
      - Videos Search - Search Engines
        - Most Popular (High Ranking Based on Alexa Rankings)
        - Informative Video Search Engines
      - Document Format Search Engines for PDF, DOCX, XLS, PPT

- PDF File Format Advantages
- Information Aggregator Search Engines (Meta-Crawlers)
- Natural Language Query Search Engines
  - Built-in Algorithmic Intelligence
  - Human Assisted Search Results
  - Human Contributed Directories
    - A Non-Paid Directory
    - Paid Directories
- Data Collector Search Engines
- ☐ Web Search Query
- ☐ Search Query Building Units Explained
  - Keywords and Phrase Search
    - Strategy for building “Keywords Query.”
      - The Keywords Selection
        - Primary Keywords
        - Secondary Keywords
        - Use of Power Words
        - Narrow Search by Adding More Keywords Combinations and Analyze
        - Narrow Search by Phrasing Query in Appropriate English
        - Applying Singular and Plurals on Keyword Queries
        - Use of Synonyms and Related Terms
        - Combination Keyword Alternatives
      - Types of Search Queries
        - A Navigational Search Query
        - Informational search queries
        - Transactional search queries
    - The Keywords Combinations and Intent Recognition *by* Search Engines
      - Communicating Intent Behind the Query
      - Intent Interpretation by Search Engine
      - Query Building Tips
  - Boolean Operators and Symbols

- Basic Operators and Symbols
  - The Basic Operators
  - Other Symbols and Notations
  - Advance Search Operator
- Summary of Query Search Concepts
- Videos Search
  - The Video Research Strategy
    - Identify Nature of Search for the Video Types
      - Investigative or Fact Finding (Evidence Finding)
      - Event Verification (News and Social Media Collaborative Networks)
      - Informative and Educational (for References)
    - Select the Types of Video Libraries
      - A “Do It Yourself”
      - “Tutorials” and “Educational Videos”
      - News Videos
        - Exclusive News Agencies Websites
        - Online News Media or Digital Media Journalism
        - Independent News Websites
        - Local News Sites
        - News Aggregators
        - TV/Online Broadcast Channels or IP TV
    - Product Reviews
    - Social Media Videos or Shared Videos
  - Video Market Statistics Charts for Researchers
    - Popular Video Discovery Source (Chart 1)
    - Market Share of Video Upload Websites (Chart 2)
    - Global Market Video Viewing Share (Chart 3)
    - List of Video Upload Websites (Alphabetically Arranged)
  - Video Authenticity Verifications
    - Assessing the Video Authenticity
      - Verification Level

- Standard of Video Proof
- Corroborating Evidence
- Video Verification Methods
  - Video Verification with Google Earth
    - Method of Satellite Imagery Verification for Video Shoots
  - You Tube Videos Authenticity Verification
  - Time and Date Stamp Verification
  - Avoid Video Clips Tagging
- Apply Video Search Techniques
  - YouTube Advance Search Filters
  - Advanced Search in Video Manager
    - Search by video ID
    - Use of Advanced Search Operators
- Researching with Images
  - Image Search
    - Textual Web Search (IWS)
      - Advantages of Image Web Search for Research
    - Reverse Image Web Search (RIWS)
      - Practical uses for reverse image search include:
- Online Forums or Communities for Research
  - Introduction
  - Forums Classified by their Nature, Types, Objectives and Content
    - Public Forums and Virtual Communities
    - Private Forums and Communities
    - Temporary Forums and Communities
    - Customer Forums (Relationship Management and Technical Support Forums)
    - Website and Portals Specific
    - Forums of Known Brand Names & Industry Leaders
    - Forums of the Deep Web
  - Examples of Online Forums
    - General Category

- Technology Related
- Social Science
- Significance of Forums and Online Community
- Forums as an Online Research Tool
- Detecting Forum Trolls
- Blogs Search and Research
  - Blogs for Research
    - Creditability Assessments
    - Blogs Site Quality Assessment Questions
  - Some Credible Blogs/Bloggers
- Finding Information with Social Media Search
  - Introduction to Social Media Research
  - Social Media Research Best Resources
  - Research with Twitter
    - Significant Benefits of Twitter for Research
      - General Questions Answered from Targeted Groups.
      - News Collected in Real-Time
      - Verification for News Sources
      - Creates Communities for Research
    - Twitter Advance Search Box
      - Precision Search or Advance Search with Twitter
        - How to use Advanced Search
        - How to Refine Advanced Search (A)
        - The “Positive”, “Negative” of Advance Search (B)
    - Twitter Advance Search with Operators
    - Research Data Collection Advantages with Twitter

**Information Trapping or Real-Time Information Collection (RSS Feed)**

- Introduction
- Information Trapping
  - Information Trapping: Definition
  - Benefits of Information Trapping

- Drawbacks of Information Trapping
- Planning Information Trapping
- ☐ RSS (A Real Simple Syndication)
  - RSS: Definition
    - Finding RSS Feeds
    - Types of RSS Feeds
      - Direct Streaming Feeds (API Script Based or Subscription Feeds)
      - Phrase Based Feeds
- ☐ Page Monitors
  - Page Monitor: Definition
    - Page Monitor Best Use
    - Type of Page Monitors
- ☐ The E-mail Alerts
  - What is Email Alerts?
  - Advantages of Email Alerts
  - E-mail Alert Services and Malware

## **The BUSINESS of RESEARCH - CIRS® Exam Module III**

### **Course Objective**

The Business of Research is an important module for those researchers that are interested in setting up their professional practice as Independent Research Specialists. The main objective of this module is to provide a general understanding of setting up a research business and performing its operational management. The module explains steps to take from the time project is accepted and up until its final delivery.



## Questions Addressed

- What duties and responsibilities of an Independent Research Specialist?
- How to set up research business?
- How do you procure a research contract, assess scope of work and build proposals?
- How to interact with the client?
- What are different types of research work contracts?
- What are the different costing and pricing methods?
- What are types of financing available and how to manage cash flows and accounts?
- What are different software tools required to run a software business?

## Concept Discussion

The concepts explained in this module are to provide sound footing for a research specialist to establish their own independent research practice. The module addresses operational and management elements of a small size business.

Here are some of the main concepts that are covered in the syllabus:

- Business Registration and Legal Framework
- Engagement with Client.
- Business Management
- Types of Research Contracts
- Costing, Budgeting and Execution of Contractual Work
- Execution of Contracts and Delivery of Projects

## Learning Advantages

- A research specialist will have a sound understanding of running their own business practice as an Independent Researcher.
- An overview of the essential elements of business management can provide an insight into operational issues, risks, advantages and disadvantages of working independently.

## CIRS® Exam Module III - TABLE OF CONTENT

### **BUSINESS OF RESEARCH**

#### **An Independent Research Contractor and Consulting Business**

- Factors to Consider Before Starting a Research Business
- Advantage of Hiring an Independent Research Specialists
- Independent Vs Collaborative Research
- Independent Research Specialists Skill Requirements
  - Client Communication
  - Interaction with Diversities
  - Flexibility of Client Dealing
  - Conducting Clients First Meeting
  - Getting Prepared Before the Meeting
    - During the Meeting
  - Making Careful Project Commitment
  - Self Assess Entrepreneurship Abilities
  - Accurate Project Pricing and Quotations
  - Contract Negotiation Skills
  - Marketing and Marketability

- Services Differentiator
- Applying Acceptable Pricing Methods
- Research Project Pricing
  - Pricing Models
    - Fixed Price
    - Time and Material (Cost Plus)
    - Risk-Reward
    - Retainer Based Pricing
  - Price Determination Factors
    - Business Size of a Client
    - Size of the Research Project
    - Complexity of Research Project
    - The volume of data collected and processed
    - Type of Engagement - Subcontracting Vs Direct Contracting
    - Offer Marketable Service Packages
  - Minimum Hourly Rate Calculations – (Illustration)
  - Project Estimates and Billing Calculations – (Illustration)
- Project Engagement Documents
  - Request for Information (RFI) [Client Side Doc]
  - The Main Goals of RFI
  - Request for Proposal (RFP) [Client Side Doc]
  - Request for Quote (RFQ) [Client Side Doc]
- Template of an RFI, RFP, and RFQ from the Client
  - An Executive Summary or a Brief Background of the Client
  - Response Guidelines
    - RFI from Client Side
    - Client will add the following information if it is an RFP or RFQ
  - Criteria's of Selection by Client
  - Non-disclosure and Confidentiality Agreement
- A Response to an RFP as a "Research Proposal" [Researcher Side Doc]
  - Initial Considerations before Responding to an RFP/RFQ

- Response to RFP/RFQ Guidelines and Steps to Follow

## **BUSINESS STRUCTURING**

- Legal Considerations
- Other Business Structuring Considerations
- Business Structures in North America (Canada and USA)
  - Sole proprietorship
    - Pros of Sole Proprietorships
    - Cons of Sole Proprietorships
  - Partnership
    - A General Partnership
    - Pros of Partnerships (General Partnership)
    - Cons of Partnerships (General Partnership)
    - Limited Partnership
    - Pros of Limited Partnerships
    - Cons of Partnerships (Limited Liability or Limited Partnership)
- A Corporation
  - Responsibility for your corporation's debts
    - Pros of a Corporation
    - Cons of a Corporation
    - S Corporation
    - Pros of S Corporation
    - Cons of S Corporation
- Limited Liability Corporation (LLC)
  - Pros of LLCs
  - Cons of LLCs

## **BUSINESS CASH FLOW ASSESSMENT**

- Business Formation Cash Flow Requirements
  - Pre-Money Cycle Sustenance Revenue
  - Post-money Cycle Activity Sustenance Cost
  - Business Extension or Expansion Cash Flow

- Debts and Financial Services Cash Flow
- Typical Sources of Financing
  - Credit Cards
  - Credit Lines
  - Bank Loans
  - Share Issuance
  - Private Funding (Promissory Notes)
- Good Financing Vs Bad Financing
  - Good Financing
  - Bad Financing

#### **ESSENTIAL SOFTWARE FOR RESEARCH BUSINESS**

- Types of Software Requirements
  - Research Reference Manager Software
  - Note-Taking and Documents
  - Bookmarking
  - Mind Mapping
  - Personal Wikis
  - Highlighters and Sticky Notes
  - To-Do Lists
  - Collaboration
  - Personal Calendars
  - Time Trackers
  - General Organizers and Task Managers

#### **INTERNET LAW & ETHICS - CIRS® Exam Module IV**

Internet Law also referred as "Cyber Law" encompasses all transactions and activities on the internet.

The collaborative nature of the internet and its vast expansion has led to numerous legal challenges making "Internet Law" a critical perspective concerning Internet. The objective of this module is to introduce research specialists to the domain of legalities in Internet and teach them how to minimize their liabilities and mitigate legal risks. Teaching about Ethical Practices on Internet compliments legal framework of legal rights, responsibilities and obligations. In conducting effective internet research, having a thorough understanding of the ethical challenges facing internet research and tackling them accordingly is a necessity. Ethical issues challenge researchers in many ways. These usually involve consumer rights and responsibilities towards them and the society. It explains the language of right and wrong, moral decisions - what is good and bad? Etc.

### Course Objective

- What are the main areas of Internet Law?
- What is jurisdiction, cybercrimes, electronic and digital signatures, intellectual property, data protection and privacy?
- What laws apply to electronic commerce and online financial transactions, false advertisement, intentional misinformation and sabotaging of information?
- What are the ethical issues of privacy, religious sensitivities, and cultures on Internet? And how do they impact information usability and attach responsibility for Internet researcher?

### Questions Addressed

- What are the main areas of Internet Law?
- What is jurisdiction, cybercrimes, electronic and digital signatures, intellectual property, data protection and privacy?
- What laws apply to electronic commerce and online financial transactions, false advertisement, intentional misinformation and sabotaging of information?
- What are the ethical issues of privacy, religious sensitivities, and cultures on Internet? And how do they impact information usability and attach responsibility for Internet researcher?

## Concept Discussion

On completion of this section, the candidate should have awareness of how the law impacts online researchers and their ability to obtain and use digital information without causing liability issues. The subject of Ethics infuses debates on topics like, privacy, intellectual property infringement and professional conduct as an example. In this section we discuss the guidelines for the Internet Law and Ethical concerns for the use of Internet accessed information

Here are some of the main concepts that are covered in the syllabus:

- Jurisdictions, Intellectual Property, Electronic Contracts and Signatures.
- Cyber Crimes and Differentiation of Civil Code Vs Criminal Code.
- Laws on Deliberate Misinformation, Misrepresentations, False Ads, Copyrights and Patent Infringements.
- Practical Application of Internet Laws and Ethical Issues with Simulated Cases.
- The concept of working with human subject research, public and private information/spaces, informed consent, privacy, anonymity, confidentiality and revealing identities.

## Learning Advantages

- Builds awareness for a research specialist in tackling legal impacts of their research work for when using web extracted information or dealing with privacy issues, copyrighted material and human subject research. It allows them to obtain and use digital information without causing liability issues.

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