

# Information Literacy Competency Standards for Higher Education: Standards, Indicators, and Outcomes for the Graduate Curriculum at UCCS

## Standard One

**The information literate student determines the nature and extent of the information needed.**

P2. The information literate student identifies a variety of types and formats of potential sources for information.

O1. Knows how information is formally and informally produced, organized, and disseminated.

- Describes the publication cycle appropriate to the discipline of a research topic.
- Defines the "invisible college" (e.g., personal contacts, listservs specific to a discipline or subject) and describes its value.

O2. Recognizes that knowledge can be organized into disciplines that influence the way information is accessed.

- Names the three major disciplines of knowledge (humanities, social sciences, sciences) and some subject fields that comprise each discipline.
- Finds sources that provide relevant subject field- and discipline-related terminology.
- Uses relevant subject- and discipline-related terminology in the information research process.
- Describes how the publication cycle in a particular discipline or subject field affects the researcher's access to information.

O4. Identifies the purpose and audience of potential resources (e.g., popular vs. scholarly, current vs. historical).

- Distinguishes characteristics of information provided for different audiences.
- Identifies the intent or purpose of an information source (this may require use of additional sources in order to develop an appropriate context).

O5. Differentiates between primary and secondary sources, recognizing how their use and importance vary with each discipline.

- Describes how various fields of study define primary and secondary sources differently.
- Identifies characteristics of information that make an item a primary or secondary source in a given field.

P3. The information literate student considers the costs and benefits of acquiring the needed information.

O1. Determines the availability of needed information and makes decisions on broadening the information seeking process beyond local resources (e.g., interlibrary loan; using resources at other locations; obtaining images, videos, text, or sound).

- Determines if material is available immediately.
- Uses available services appropriately to obtain desired materials or alternative sources.

## **Standard Two**

### **The information literate student accesses needed information effectively and efficiently.**

P1. The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.

O3. Investigates the scope, content, and organization of information retrieval systems.

- Describes the structure and components of the system or tool being used, regardless of format (e.g., index, thesaurus, type of information retrieved by the system).
- Identifies the source of help within a given information retrieval system and uses it effectively.
- Identifies what types of information are contained in a particular system (e.g., all branch libraries are included in the catalog; not all databases are full text; catalogs, periodical databases, and Web sites may be included in a gateway).
- Distinguishes among indexes, online databases, and collections of online databases, as well as gateways to different databases and collections.
- Selects appropriate tools (e.g., indexes, online databases) for research on a particular topic.
- Identifies the differences between freely available Internet search tools and subscription or fee-based databases.
- Identifies and uses search language and protocols (e.g., Boolean, adjacency) appropriate to the retrieval system.
- Determines the period of time covered by a particular source.
- Identifies the types of sources that are indexed in a particular database or index (e.g., an index that covers newspapers or popular periodicals versus a more specialized index to find scholarly literature).
- Demonstrates when it is appropriate to use a single tool (e.g., using only a periodical index when only periodical articles are required).
- Distinguishes between full-text and bibliographic databases.

O4. Selects efficient and effective approaches for accessing the information needed from the investigative method or information retrieval system.

- Selects appropriate information sources (i.e., primary, secondary or tertiary sources) and determines their relevance for the current information need.
- Determines appropriate means for recording or saving the desired information (e.g., printing, saving to disc, photocopying, taking notes).
- Analyzes and interprets the information collected using a growing awareness of key terms and concepts to decide whether to search for additional information or to identify more accurately when the information need has been met.

P2. The information literate student constructs and implements effectively-designed search strategies.

## O1. Develops a research plan appropriate to the investigative method.

- Describes a general process for searching for information.
- Describes when different types of information (e.g., primary/secondary, background/specific) may be suitable for different purposes.
- Gathers and evaluates information and appropriately modifies the research plan as new insights are gained.

## O2. Identifies keywords, synonyms and related terms for the information needed.

- Identifies keywords or phrases that represent a topic in general sources (e.g., library catalog, periodical index, online source) and in subject-specific sources.
- Demonstrates an understanding that different terminology may be used in general sources and subject-specific sources.
- Identifies alternate terminology, including synonyms, broader or narrower words and phrases that describe a topic.
- Identifies keywords that describe an information source (e.g., book, journal article, magazine article, Web site).

## O3. Selects controlled vocabulary specific to the discipline or information retrieval source.

- Uses background sources (e.g., encyclopedias, handbooks, dictionaries, thesauri, textbooks) to identify discipline-specific terminology that describes a given topic.
- Explains what controlled vocabulary is and why it is used.
- Identifies search terms likely to be useful for a research topic in relevant controlled vocabulary lists.
- Identifies when and where controlled vocabulary is used in a bibliographic record, and then successfully searches for additional information using that vocabulary.

## O4. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books).

- Demonstrates when it is appropriate to search a particular field (e.g., title, author, subject).
- Demonstrates an understanding of the concept of Boolean logic and constructs a search statement using Boolean operators.
- Demonstrates an understanding of the concept of proximity searching and constructs a search statement using proximity operators.
- Demonstrates an understanding of the concept of nesting and constructs a search using nested words or phrases.
- Demonstrates an understanding of the concept of browsing and uses an index that allows it.
- Demonstrates an understanding of the concept of keyword searching and uses it appropriately and effectively.
- Demonstrates an understanding of the concept of truncation and uses it appropriately and effectively.

## O5. Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameters.

- Uses help screens and other user aids to understand the particular search structures and commands of an information retrieval system.
- Demonstrates an awareness of the fact that there may be separate interfaces for basic and advanced searching in retrieval systems.

- Narrows or broadens questions and search terms to retrieve the appropriate quantity of information, using search techniques such as Boolean logic, limiting, and field searching.
- Identifies and selects keywords and phrases to use when searching each source, recognizing that different sources may use different terminology for similar concepts.
- Formulates and executes search strategies to match information needs with available resources.
- Describes differences in searching for bibliographic records, abstracts, or full text in information sources.

O6. Implements the search using investigative protocols appropriate to the discipline.

- Locates major print bibliographic and reference sources appropriate to the discipline of a research topic.
- Locates and uses a specialized dictionary, encyclopedia, bibliography, or other common reference tool in print format for a given topic.
- Demonstrates an understanding of the fact that items may be grouped together by subject in order to facilitate browsing.
- Uses effectively the organizational structure of a typical book (e.g., indexes, tables of contents, user's instructions, legends, cross-references) in order to locate pertinent information in it.

P3. The information literate student retrieves information online or in person using a variety of methods.

O3. Uses specialized online or in person services available at the institution to retrieve information needed (e.g., interlibrary loan/document delivery, professional associations, institutional research offices, community resources, experts and practitioners).

- Retrieves a document in print or electronic form.
- Describes various retrieval methods for information not available locally.
- Identifies the appropriate service point or resource for the particular information need.
- Initiates an interlibrary loan request by filling out and submitting a form either online or in person.
- Uses the Web site of an institution, library, organization or community to locate information about specific services.

O4. Uses surveys, letters, interviews, and other forms of inquiry to retrieve primary information.

P4. The information literate student refines the search strategy if necessary.

O1. Assesses the quantity, quality, and relevance of the search results to determine whether alternative information retrieval systems or investigative methods should be utilized.

- Determines if the quantity of citations retrieved is adequate, too extensive, or insufficient for the information need.
- Evaluates the quality of the information retrieved using criteria such as authorship, point of view/bias, date written, citations, etc.
- Assesses the relevance of information found by examining elements of the citation such as title, abstract, subject headings, source, and date of publication.
- Determines the relevance of an item to the information need in terms of its depth of coverage, language, and time frame.

O2. Identifies gaps in the information retrieved and determines if the search strategy should be revised.

O3. Repeats the search using the revised strategy as necessary.

P5. The information literate student extracts, records, and manages the information and its sources.

O3. Differentiates between the types of sources cited and understands the elements and correct syntax of a citation for a wide range of resources.

- Identifies different types of information sources cited in a research tool.
- Determines whether or not a cited item is available locally and, if so, can locate it.
- Demonstrates an understanding that different disciplines may use different citation styles.

O4. Records all pertinent citation information for future reference.

O5. Uses various technologies to manage the information selected and organized.

### **Standard Three**

**The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.**

P2. The information literate student articulates and applies initial criteria to evaluate both the information and its sources.

O1. Examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.

- Locates and examines critical reviews of information sources using available resources and technologies.
- Investigates an author's qualifications and reputation through reviews or biographical sources.
- Investigates validity and accuracy by consulting sources identified through bibliographic references.
- Investigates qualifications and reputation of the publisher or issuing agency by consulting other information resources. (See also 3.4.e.)
- Determines when the information was published (or knows where to look for a source's publication date).
- Recognizes the importance of timeliness or date of publication to the value of the source.
- Determines if the information retrieved is sufficiently current for the information need.
- Demonstrates an understanding that other sources may provide additional information to either confirm or question point of view or bias.

P4. The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.

O1. Determines whether information satisfies the research or other information need.

O5. Determines probable accuracy by questioning the source of the data, the limitations of the information gathering tools or strategies, and the reasonableness of the conclusions.

- Describes how the reputation of the publisher affects the quality of the information source. (See also 3.2.a.).
- Determines when a single search strategy may not fit a topic precisely enough to retrieve sufficient relevant information.
- Determines when some topics may be too recent to be covered by some standard tools (e.g., a periodicals index) and when information on the topic retrieved by less authoritative tools (e.g., a Web search engine) may not be reliable.
- Compares new information with own knowledge and other sources considered authoritative to determine if conclusions are reasonable.

O7. Selects information that provides evidence for the topic.

- Describes why not all information sources are appropriate for all purposes (e.g., ERIC is not appropriate for all topics, such as business topics; the Web may not be appropriate for a local history topic).
- Distinguishes among various information sources in terms of established evaluation criteria (e.g., content, authority, currency).
- Applies established evaluation criteria to decide which information sources are most appropriate.

P7. The information literate student determines whether the initial query should be revised.

O1. Determines if original information need has been satisfied or if additional information is needed.

O2. Reviews search strategy and incorporates additional concepts as necessary.

- Demonstrates how searches may be limited or expanded by modifying search terminology or logic.

O3. Reviews information retrieval sources used and expands to include others as needed.

- Examines footnotes and bibliographies from retrieved items to locate additional sources.
- Follows, retrieves and evaluates relevant online links to additional sources.
- Incorporates new knowledge as elements of revised search strategy to gather additional information.

#### **Standard Four**

**The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.**

P2. The information literate student revises the development process for the product or performance.

O1. Maintains a journal or log of activities related to the information seeking, evaluating, and communicating process.

#### **Standard Five**

**The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.**

P1: The information literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology.

O2: Identifies and discusses issues related to free vs. fee-based access to information.

- Demonstrates an understanding that not all information on the Web is free, i.e., some Web-based databases require users to pay a fee or to subscribe in order to retrieve full text or other content.
- Demonstrates awareness that the library pays for access to databases, information tools, full-text resources, etc., and may use the Web to deliver them to its clientele.
- Describes how the terms of subscriptions or licenses may limit their use to a particular clientele or location.
- Describes the differences between the results of a search using a general Web search engine (e.g., Yahoo, Google) and a library-provided tool (e.g., Web-based article index, full-text electronic journal, Web-based library catalog).

O4. Demonstrates an understanding of intellectual property, copyright, and fair use of copyrighted material.

P2. The information literate student follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources.

O5. Legally obtains, stores, and disseminates text, data, images, or sounds.

O6. Demonstrates an understanding of what constitutes plagiarism and does not represent work attributable to others as his/her own.

P3. The information literate student acknowledges the use of information sources in communicating the product or performance.

O1. Selects an appropriate documentation style and uses it consistently to cite sources.

- Describes how to use a documentation style to record bibliographic information from an item retrieved through research.
- Identifies citation elements for information sources in different formats (e.g., book, article, television program, Web page, interview).
- Demonstrates an understanding that there are different documentation styles, published or accepted by various groups (1).
- Demonstrates an understanding that the appropriate documentation style may vary by discipline (e.g., MLA for English, University of Chicago for history, APA for psychology, CBE for biology)
- Describes when the format of the source cited may dictate a certain citation style.
- Uses correctly and consistently the citation style appropriate to a specific discipline.
- Locates information about documentation styles either in print or electronically, e.g., through the library's Web site.
- Recognizes that consistency of citation format is important, especially if a course instructor has not required a particular style.