

Information Literacy Matrix for the College of Nursing: Version 2005.12.02

By

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Rationale: Healthcare educators have a strategic role in enhancing quality of care and in reducing medical errors in healthcare. The Institute of Medicine along with professional nursing organizations nationwide has called for a shift in the paradigm of care delivery to one directed by current best practice or evidence-based practice (EBP). The Institute of Medicine (2001) identified EBP as a primary means for enhancing patient safety and improving quality and efficiency of practice. One role for healthcare educators, therefore, is to ensure a healthcare workforce that has the information literacy knowledge and skills necessary to implement EBP. Integrating information literacy across curricula of all programs nationwide is crucial. How prepared for this change are healthcare educators?

A recently released national study, Readiness for Evidence Based Practice: Information Literacy of Nurses in the U.S., reports results from a survey of nurse administrators, clinicians, and educators about their information literacy knowledge and skills, the ability to recognize when information is needed and to identify, access, and appraise resources for evidence to guide practice. All regions and states in the US are represented. Outcomes of the study have implications for organizational infrastructure, nursing continuing education, and basic nursing education. Gaps in healthcare educators' information literacy knowledge, skills, and access to information resources must be addressed for healthcare providers to be able to incorporate evidence into clinical decision-making, utilizing that evidence to provide best care for patients.

Information literacy has been identified by the American Nurses Association (ANA) as a competency for the basic nurse. In Louisiana, the Board of Regents has mandated information literacy as core content. The importance lies in its contribution to the healthcare provider's ability to identify and use current best available research literature in the conduct of EBP, subsequently leading to improvement in patient outcomes. Indeed, how can one implement best practices if one does not even know such exists?

* "Teaching Content" and "Examples of Learner Activities" can be used in any of the courses, in any order.

** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Motivated by the desire to have Northwestern students be leaders in evidence-based practice, two faculty workshops held in March and April of 2005 introduced the College of Nursing Information Literacy Plan along with the following matrix that shows the relationship of five Information Literacy standards and their performance indicators (based on the recommendations of the Association of College & Research Libraries). Tied to the standards and indicators are charts that show the connection of learning outcomes to teaching content, learner activities, and courses. The College of Nursing is a leader in this effort for the University.

Purpose: *To produce graduates who legally and ethically access, appraise, and integrate information from multiple sources and systems to influence practice.*

Overview: The Information Literacy Plan for the College of Nursing is a dynamic document intended to facilitate student and faculty movement along the novice to expert continuum for information management towards delivery of evidence-based healthcare. Mastery of information literacy and research skills will be demonstrated by 80% of the students receiving a grade of *C* or greater on course-specific identified learner activities.* Eventually, a capstone activity will be identified for all programs; at present, it has been identified for the generic BSN program (the research critique in NURB 4100); for the RN to BSN program (the recruitment and retention project in NURB 4290); and for the radiologic technology program (the clinical research paper in RADT 4611).** Still to come is a capstone activity for the Associate of Science Degree in Nursing (ASN) and the Master of Science in Nursing (MSN). Ninety percent (90%) of the students will score a *B* or better on the respective capstone activity. Students will submit a portfolio in the final course of their respective program. The portfolio will have a checklist which identifies course-specific learner activities completed in the program related to Information Literacy.

Course Prefixes:

NURA = courses in the Associate of Science in Nursing (ASN) program

NURB = courses in the Bachelor of Science in Nursing (BSN) program

NURG = courses in the Master of Science in Nursing (MSN) program

RADT = courses in the Bachelor of Science in Radiologic Technology (BSRT) program

References: Institute of Medicine, Committee on Quality of Health Care in America. 2001. *Crossing the quality chasm: A new health system for the 21st Century*. Washington, DC: National Academies Press. Available at <http://www.nap.edu/books/0309072808/html/> (accessed December 2, 2003). For a complete list of references pertinent to the Information Literacy plan, see *Information Literacy Bibliography* at http://www.nsula.edu/watson_library/shreve/NLN_info_lit%20.pdf

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

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

Performance Indicator: The information literate student defines and articulates the need for information and identifies a variety of types and formats of potential sources for information.

Learner Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Recognizes how information is formally and informally produced, organized, and disseminated.	<ol style="list-style-type: none"> 1. Overview and definition of information literacy. 2. Review of information literacy purpose & process. 3. Review of the Texas Information Literacy Tutorial (TILT) Introduction. 	<ol style="list-style-type: none"> 1. Completion of TILT self-grading quizzes or other tutorials. 2. Paper on a topic of student's choice. 	OR 1010 ENG 1010 NURA 1050 NURB 2160 NURB 3120	OR 1010 ENG 1010 RADT 3311 RADT 3900
Develops, formulates, and revises research questions based on general to specific exploration of sources and systems.	<ol style="list-style-type: none"> 1. Searching library databases (TILT). 2. Developing research questions (CORE). 3. Review of Search Strategy Planner. 	<ol style="list-style-type: none"> 1. TILT Module II. 2. Ethical debate, analysis, or project. 3. Cultural paper. 4. Concept paper. 5. Development of a research question. 6. Research critique.** 7. Clinical research paper.** 8. Completion of a Search Strategy Planner. 	NURB 2160 NURB 3120 NURB 4100**	RADT 2200 RADT 3311 RADT 3811 RADT 4520 RADT 4611**

* "Teaching Content" and "Examples of Learner Activities" can be used in any of the courses, in any order.

** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Learner Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Identifies the value and differences of potential resources in a variety of formats (e.g., database, website, or book).	<ol style="list-style-type: none"> 1. Criteria for critiquing health care information on the Web. 2. Reviewing a database tutorial (ex., ProQuest Nursing Journals, EBSCO HealthSource Nursing Academic Edition). 3. Reviewing the Information Literacy PowerPoint tutorial. 	<ol style="list-style-type: none"> 1. Tilt Module III. 2. Website critique. 3. Multiple database searches. 4. Database comparison. 5. Search for print and electronic books and media in the online catalog. 	NURB 3120	RADT 2200 RADT 3311 RADT 3900 RADT 4520
Differentiates between primary vs. secondary and popular vs. scholarly, and current vs. classical and research vs. non-research sources.	<ol style="list-style-type: none"> 1. Selecting sources. 2. Review of Search Strategy Planner. 	<ol style="list-style-type: none"> 1. TILT Module I. 2. Bibliographic cards. 3. Annotated bibliography/Literature review. 4. Clinical research paper.** 5. Completion of a Search Strategy Planner. 	NURB 3030 NURB 3122 NURB 3120 NURB 3224 NURB 4100**	RADT 3311 RADT 3811 RADT 3900 RADT 4520 RADT 4611**

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Standard Two: The information literate student accesses needed information effectively and efficiently.

Performance Indicator: The information literate student constructs and implements effectively-designed searches.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Develops a research plan appropriate to the assignment.	<ol style="list-style-type: none"> 1. Selecting information sources – TILT. 2. Planning your project – CORE. 3. Review of Search Strategy Planner. 	<ol style="list-style-type: none"> 1. TILT Module I & Quiz. 2. CORE Quiz 8. 3. Cultural paper. 4. Concept paper. 5. Database search. 6. Online catalog search. 7. Completion of a Search Strategy Planner. 8. Clinical research paper.** 	NURB 2160 NURB 3120 NURB 3120	RADT 3311 RADT 3900 RADT 4520 RADT 4611**
Identifies keywords and appropriate terms for the information needed.	<ol style="list-style-type: none"> 1. Searching library database & Internet (TILT II). 2. Keyword searching (CORE). 3. Review of Search Strategy Planner. 4. Review of any database PowerPoint tutorial. 	<ol style="list-style-type: none"> 1. TILT Module II 2. CORE Quiz 6. 3. Concept paper. 4. Database search. 5. Completion of a Search Strategy Planner. 	NURB 2160 NURB 3120	RADT 3300 RADT 3311 RADT 3900 RADT 4520

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Implements search strategy in various information retrieval systems combining search terms effectively.	<ol style="list-style-type: none"> 1. Searching Library Database & Internet 2. (TILT II). 3. Keyword searching (CORE). 4. Review of Search Strategy Planner. 5. Review of any database PowerPoint tutorial. 	<ol style="list-style-type: none"> 1. TILT Module II & Quiz. 2. CORE Quiz 6. 3. Concept paper. 4. Completion of a Search Strategy Planner. 	NURB 2160 NURB 3120	RADT 3311 RADT 3900 RADT 4520

Performance Indicator: The information literate student extracts, records, and manages information and information resources.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Assesses the quantity, quality, and relevance of the search results to determine whether alternative approaches should be utilized. Repeats the search using the revised strategy as necessary.	<ol style="list-style-type: none"> 1. Searching library database & Internet 2. (TILT II). 3. Using a Search Strategy Planner (CORE). 4. Review of any database PowerPoint tutorial. 	<ol style="list-style-type: none"> 1. TILT Module II & Quiz. 2. Concept paper. 3. Database comparison. 4. Completes a Search Strategy Planner. 	NURB 3120	RADT 3311 RADT 3900 RADT 4520

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Standard Three: The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base, value system, and practice.

Performance Indicator: The information literate student summarizes and synthesizes the main concepts to be extracted from the information gathered in order to apply these concepts in a variety of settings.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Restates pertinent concepts in his/her own words and selects data accurately.	<ol style="list-style-type: none"> 1. OWL Tutorial. 2. "Ask English." 3. Plagiarism. 	<ol style="list-style-type: none"> 1. Assignment in English 1010. 2. Preparation of a bibliographic card or annotated citation. 3. Summary/abstract of an article, with student citing the article according to the <i>Publication Manual of the American Psychological Association</i> (APA) style. 4. Clinical research paper.** 	ENGL 1010 NURB 2160 NURB 3120	RADT 3900 RADT 4520 RADT 4611
Recognizes interrelationships among concepts and with supporting evidence applies them to health care.	<ol style="list-style-type: none"> 1. Concept identification (NANDA, NOC, NIC). 2. Concept mapping process. 3. Relationship aspects of nursing process/problem solving, information literacy, & evidence based practice. 	<ol style="list-style-type: none"> 1. Nursing Care Plan (application of NANDA, NOC, NIC). 2. Concept mapping. 3. Bibliographic cards/Implications to practice. 4. Concept paper. 5. Research utilization. 6. Research critique.** 7. Clinical research paper.** 	All clinical courses NURB 3030 NURB 3122 NURB 3224 NURB 4100**	All clinical courses RADT 4520 RADT 4611**

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Performance Indicator: The information literate student articulates and applies criteria for evaluating both the information and its sources.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.	<ol style="list-style-type: none"> 1. Evaluating & citing information sources (TILT). 2. Evaluating sources (CORE). 3. Evaluating a health website. 4. Orientation to the HonCode Code of Conduct. 5. Orientation to the National Library of Medicine's "MedlinePlus Guide to Healthy Web Surfing." 	<ol style="list-style-type: none"> 1. Database comparisons. 2. Website critique. 3. TILT Module III & Quiz. 4. CORE Quiz 9. 	NURB 3120	RADT 3811 RADT 4520

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Recognizes that the environment (e.g. cultural, physical, or geographical) within which the information was created may influence the interpretation of information.	<ol style="list-style-type: none"> 1. Evaluating & citing information sources (TILT). 2. Evaluating sources (CORE). 3. Evaluating a health website. 4. Orientation to the HonCode Code of Conduct. 5. Orientation to the National Library of Medicine's "MedlinePlus Guide to Healthy Web Surfing" 	<ol style="list-style-type: none"> 1. Cultural paper/presentation. 2. Website critique. 3. TILT Module III & Quiz. 4. CORE Quiz 9. 	NURB 2160 NURB 3120	RADT 3811 RADT 4520

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Performance Indicator: The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information for decision making.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Determines probable accuracy of new knowledge by questioning the scientific research process used in evidence based studies.	<ol style="list-style-type: none"> 1. Steps of the research process. 2. Critique for study appraisal. 3. Evidence-based process. 	<ol style="list-style-type: none"> 1. Research critique.** 2. Research utilization. 3. Annotated bibliography of empirical studies. 4. Preparation of a thesis or research paper. 5. Critique of a meta-analysis. 	NURB 4100** NURB 3224) NURG 5080 NURG 5010 NURG 5780 NURG 5790 NURG 5950 NURG 5970 NURG 5995	RADT 4520
Draws conclusions based upon information gathered and if applicable integrates new information into practice.	<ol style="list-style-type: none"> 1. Steps of the research process. 2. Critique for study appraisal. 3. Evidence-based process. 	<ol style="list-style-type: none"> 1. Care plan/Case study. 2. Research proposal. 3. Research proposal expansion. 4. Research critique.** 5. Research utilization. 6. Clinical research paper.** 	All clinical courses NURB 4100** NURB 3224 NURB 3224	RADT 4520 RADT 4611**

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

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

Performance Indicator: The information literate student applies, develops, revises, and communicates new and prior information to the planning and creation of a professional activity.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Organizes and integrates the new and prior information, including quotations and paraphrasings, in a manner that supports the purposes of the professional activity.	<ol style="list-style-type: none"> 1. APA format & style. 2. OWL & other tutorials. 3. Plagiarism. 	<ol style="list-style-type: none"> 1. Philosophy paper. 2. Literature search. 3. Concept paper. 4. Research utilization. 5. Research critique.** 6. Global health paper. 7. Change Agent paper, R & R paper. 8. Clinical research paper.** 9. Group recruitment & retention project.** 	NURB 3130 NURB 3120 NURB 3122 NURB 3224 NURB 4100** NURB 4190 NURB 4290**	RADT 3300 RADT 3311 RADT 3811 RADT 3910 RADT 4520 RADT 4611**
Uses information technology applications (e.g. software [Access, Excel, Word, PowerPoint, Blackboard, video]) in creating the professional product.	<ol style="list-style-type: none"> 1. Blackboard orientation/tutorial. 2. Use of bibliographic databases. 3. Presentation tutorials. 	<ol style="list-style-type: none"> 1. Presentation software project. 2. Cultural presentation/Ethical debate. 3. Teaching plans/projects. 4. Patient teaching project. 5. Community health project. 6. Staff development project. 7. Clinical research paper.** 	NURB 3120 NURB 4100** NURB 2160 clinical courses NURB 3225 NURB 4191 NURB 4220 NURB 4291	RADT 3300 RADT 3900 RADT 3811 RADT 3920 RADT 4611**

* “Teaching Content” and “Examples of Learner Activities” can be used in any of the courses, in any order.

** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Communicates (orally and written) clearly and with a style that supports the purposes of the intended audience.	<ol style="list-style-type: none"> 1. Guidelines for oral presentation. 2. RN to BSN format guidelines for paper (APA format). 	<ol style="list-style-type: none"> 1. Online discussion board. 2. Cultural paper/Ethical debate. 3. Teaching plan. 4. Concept paper. 5. Patient teaching project. 6. Community health project. 7. Staff development project. 8. Research appraisal presentation.** 9. Clinical research paper.** 10. Group recruitment & retention project.** 	All internet courses NURB 2160 NURB 3120 NURB 3122 NURB 3225 NURB 4220 NURB 4190 NURB 4290** NURB 4100**	RADT 3811 RADT 3300 RADT 3920 RADT 4611**

* “Teaching Content” and “Examples of Learner Activities” can be used in any of the courses, in any order.

** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Standard Five: The information literate student analyzes the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

Performance Indicator: The information literate student analyzes the ethical, legal, and socioeconomic issues surrounding information and information technology.

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Identifies and discusses issues related to privacy and security in both the print and electronic environments.	<ol style="list-style-type: none"> 1. Evaluating & citing information sources (TILT). 2. Review of American Nurses Association “Standards of Informatics Nursing.” 3. Review of Privacy & Confidentiality ethics. 	<ol style="list-style-type: none"> 1. Presenting a case study on confidentiality. 2. TILT Module III. 3. Ethical paper. 4. Develop a teaching plan that includes a brochure and contains content from appropriate research (articles, reports, studies, etc.). 5. Agency website evaluation. 6. Website critique. 7. Patient documentation. 8. Endorsement & adherence to HIPAA policies. 9. Searching for, locating, and completing an online HIPAA Continuing Education article/tutorial. 	NURB 2100 NURB 2160 NURB 3120 NURB 3221 All clinical courses	RADT 3311 RADT 3900 RADT 4520

* “Teaching Content” and “Examples of Learner Activities” can be used in any of the courses, in any order.

** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Applies principles of intellectual property, copyright, and fair use of copyrighted material.	<ol style="list-style-type: none"> 1. Evaluating & citing information sources (TILT or APA workshop). 2. Review of copyright principles. 3. Review of intellectual property rights. 	<ol style="list-style-type: none"> 1. TILT Module III. 2. Preparation of a bibliographic card (annotated and cited in APA style). 3. Concept paper. 4. Presentation on an issue in Nursing or Radiologic Technology. 5. Development of a paper on a social or ethical issue. 6. Leadership paper. 7. Searching for, retrieving, and using an article to support a clinical or research application, accompanied by an explanation of how the article was used in patient care or research. 8. Writing a summary of an existing article/resource on plagiarism. 9. Development of a case study that follows a patient, includes research of the disease pathology, requires APA-formatted citations, and addresses ethics. 10. Clinical research paper.** 11. Group recruitment & retention project.** 	NURB 3120 NURB 4230 NURB 4290**	RADT 3311 RADT 3900 RADT 4520 RADT 4611**

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)

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

Outcome	Teaching Content *	Examples of Learner Activities *	Course(s) Nursing	Course(s) Radiologic Technology
Participates in electronic communication following accepted practices (e.g. "Netiquette").	<ol style="list-style-type: none"> 1. Guidelines for Netiquette. 2. Identifying bias. 	<ol style="list-style-type: none"> 1. Communicating electronically – email, discussion boards, chat rooms, journal club (e-mail article or post conference). 2. Writing a political letter on a community health issue. 	All courses	All courses
Preserves the integrity of information resources, equipment, systems and facilities.	<ul style="list-style-type: none"> • Review of Privacy & Confidentiality ethics. 	<ol style="list-style-type: none"> 1. HIPAA PowerPoint presentation. 2. Completing a “Human Participant Protection for Research” Tutorial. 	NURB 2160 NURB 3224 NURB 4100	RADT 3311 RADT 3900

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** Capstone Courses and Activities, to date:

NURB 4100 (research critique); NURB 4290 (recruitment & retention project); RADT 4611 (clinical research paper)