

**Tennessee State University
Brown-Daniel Library**

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Libraries and Media Centers

INFORMATION LITERACY FOR ENGINEERING STUDENTS

The goal of this course is to ensure that Tennessee State University engineering graduates are information literate, lifelong learners who can efficiently and effectively determine the nature and extent of information they need, access and evaluate the information and its sources critically and incorporate selected information into his/her knowledge base and value systems, use the information effectively to accomplish a specific purpose and understand the economic, legal and social issues about the use of information and uses it ethically and legally.

Engineering Students in General will be able to:

- determine the nature and extent of the information needed by
 - conferring with instructors and librarians to identify a research topic
 - formulating questions based on the needed information needed
 - achieving a manageable focus by defining or modifying the information needed
 - identifying the key concepts or terms that describe the information needed
 - using analytical and critical thinking skills in identifying information needed
- identify, locate and retrieve information by
 - determining type of information needed
 - determining location of information
 - selecting efficient and effective strategies to access information needed
- utilize or construct and implement effective search strategies by
 - formulating an effective search strategy
 - conducting searches using appropriate resources
 - evaluating search results and modifying search strategies as needed
- access the needed information effectively and efficiently

First Year Engineering Students will be able to:

- access and navigate the Library's web site efficiently to find information
- search the Library's online catalog and electronic resources, including databases, books and journals, and the resources on the Internet
- identify concepts and terms that describe the information needed by using controlled vocabulary and information retrieval resources in Engineering
- evaluate the scope, content and organization of information retrieval sources and information, and compile pertinent citation information for possible use
- draw conclusions based upon the information gathered, integrate new information with previous information and/or knowledge and identify the one that supports the chosen thesis
- have an understanding of plagiarism and its consequences
- select an appropriate citation style and use it correctly and consistently

Intermediate and Advanced Level Engineering Students will be able to:

- develop a thesis statement and formulate questions based on the needed information
- evaluate potential resources in a variety of formats, including databases, data set, web sites, printed materials and others
- implement search strategy by using search engines with variety of command languages, protocols and search parameters, including IEEE, CompendexWeb, ScienceDirect and others.
- broaden information seeking beyond the local resources, including interlibrary loan, Athena, TALC
- recognize that existing information combined with original thought, analysis and experimentation can produce new information
- recognize that knowledge can be organized into disciplines and can impact the way information is accessed
- use a variety of technologies to retrieve the needed information, including software, reader/printer scanners, audio visual equipment and others
- examine and compare information from various sources, including journals, conference papers and government publications to evaluate the reliability, validity, accuracy, authority and bias, if any, of the information
- use computer and other technologies, including databases, spreadsheets, charts to study the interaction of ideas
- broaden the research topic to construct new hypothesis that may require additional information
- test theories with appropriate discipline techniques, including formulas and simulations

- question the source of data retrieved as to its accuracy, timeliness, and authoritativeness
- properly use the obtained information by citing resources according to the copyright laws