What is Library Tools?
The Library Tools application dynamically generates student-centric views of library resources and tools for all courses taught at North Carolina State University. Library Tools is designed to stand outside the learning management system environment while allowing integration into multiple LMS’s. Library content is contextualized to the course wherever possible by exploiting existing and new library resource mappings to NCSU course department codes and course numbers.

Architecture
NCSU Library Tools is built on top of the concurrently developed Library Widget system. Both systems provide RESTful APIs that allow intuitive and consistent interactions. The Library Tools system passes a request for a course on to several widgets, each of which receives the course descriptor through the generic Widget handler interface and returns the most specific content available. The Library Tools system then assembles, enhances, and styles the widget content before returning a page to the user. The widgets return consistent HTML stubs to ease styling and reuse in diverse systems.

Achieving Scalability
The LT widgets are sensitive to various course contexts and can display content at varying levels of specificity – i.e. course section (BIO 101 001), course (BIO 101), curriculum (BIO), college (Life Sciences). The LT system is “smart” in that it seeks out the most customized content available on a widget by widget basis. In order to balance scalability with librarian customization we leverage preexisting data sources wherever possible while integrating librarian-created content.

How Users Reach Library Tools
Our goal is to provide course-tailored access to the Library Tools system in as many venues as possible. The current points of integration include:

Learning Management Systems:
• BlackBoard Vista - automated request / access process. Library staff must insert links.
• Moodle "block" – Instructor-added blocks that are served by the Widget System; likely to be automatically added to course pages in the future.
• WolfWare (NCSU course locker system) – automated course-level links

Library Website:
• Library Website front page
• NCSU Libraries “QuickSearch”
• Learning Commons website

Collaboration
The Library Tools development team consists of staff from the library’s Research and Information Services and Digital Library Initiatives. Additionally, the success of Library Tools depends on collaboration with a variety of stakeholders:

Students: Focus groups with students in spring 2007 and fall 2008 impact the design, content, and functionality of Library Tools.

Faculty: Faculty interest in library resources integrated into LMS’s prompted the development of Library Tools. Recommended content can be adapted to the specific requirements of course assignments. Integration into online learning environments depends on the support of faculty.

Subject specialist librarians: Reference librarians add value to Library Tools through providing “Recommended for…” resources at either the curriculum (ENG), course (ENG 101), or section (ENG 101 sect 001) levels. Subject specialists control the mappings between curricula and library resources.

Campus Partners: The library collaborated with learning technology partners on integration into the LMS’s and to promote Library Tools to faculty, staff, and students.

Learn More
Library Tools
http://www.lib.ncsu.edu/course
Project Overview
http://www.lib.ncsu.edu/dli/projects/courseviews

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Library Tools
http://www.lib.ncsu.edu/course/ENG/219

Course Reserves:
Customized to the course. Student selects their section.

Citation and Project Tools:
Links to popular resources for students. Static content which appears in all courses.

Technology Lending Ad:
Click-through widget highlights the library’s popular service for borrowing laptops, camcorders, iPods, and more.

Recommendations from subject specialist librarians:
Customized to curriculum, course, or section.

Search Options:

Quick Article Search – targets database clusters from single vendors (ex. EbscoHost, CSA)

Databases by Subject – links to recommended disciplinary databases are mapped to curriculum codes.

Catalog – single box keyword search for access to catalog.

Google Scholar – proxied search context students to library’s subscriptions in Google Scholar.

Course Look-up:
Easily switch to Library Tools for other courses.

Get Help:
Contact info for subject specialist.
Link to library’s 24-hour Ask Us virtual reference service.
libraryh3lp widget - chat with a librarian at the reference desk.

Technology Lending Ad:
Click-through widget highlights the library’s popular service for borrowing laptops, camcorders, iPods, and more.