# Improving Degree Planning Through Information Sharing

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## Abstract

Curriculum information at the UW iSchool is maintained and consumed by different groups with different content, format, and timing needs. As a result, staff efforts to develop information do not result in updates to the sources on which students rely for registration decisions. This impedes students' degree planning and ability to maximize the benefits of their education. To solve the problems inherent in the iSchool's system of course information, we propose a substantial consolidation that gathers all information available to current students and the public into a single listing that users can filter based on criteria important to them.

## Keywords

Interaction design, course information, curriculum planning, iSchool, University of Washington

## Introduction

Three times each academic year, students at the University of Washington iSchool face a daunting information problem. They must register for courses chosen from an extensive list, only a subset of which are available in any given quarter, and some of which are not currently offered at all. Scarce descriptive information is available on which to base decisions: catalog descriptions are limited by external length requirements, and supplementary information is often out of date and spread across a number of documents and other information sources.

Administration and Faculty at the iSchool labor annually to compile, review, and negotiate curriculum plans, then develop and update published information about coursework. In a complex process, they create and review draft curriculum budgets, skeletal outlines of

potential schedules, and final course assignment plans. This information is captured in artifacts largely opaque to students. Updates often fail to be propagated to sources on which students rely for registration decisions.

SCENARIO 1: TOO LITTLE INFORMATION TOO FAR APART

On the first day of her registration period, Rachel navigates to the UW Registration page. The screen display shows a set of boxes and instruction text, but no class information. Because she is in her second quarter of the MLIS program, she knows her selections are set already by the "lock-step" sequence specified by the iSchool--unless she wants to take an additional elective.

She opens a second browser window and navigates to the Master of Library and Information Science Course Information on the iSchool website. She scrolls through a long list of courses, each with a two-line description of approximately 50 words to convey 10 weeks of academic work. Rachel knows that some of the 72 courses are no longer offered, even though they are still listed. A few courses list the names of faculty and some of those names are links. She clicks a link under the description for LIS 520 and sees a page labeled "Instructor Class Description." Another paragraph adds a bit of detail about the class, but she is frustrated that most of the headings on the page have no information under them.

She clicks back to the list of all course descriptions, but it offers no indication of which are offered for the coming quarter. Slightly irritated, she opens a third browser window and navigates to Course Information > Schedules by Quarter. The page shows a table with seven degree program options and the four academic quarters. She chooses the link for her program, MLIS

To make registration decisions, students currently must consult:

- Course Descriptions Catalog

- Quarterly Course Schedule

- New Course Offerings and Special Topics Page

- Degree Program Requirements

- Class Websites (inconsistently available)

- Instructor Class Descriptions (rarely available)

- Past Syllabi (available only upon personal request)



**Multiple sources.** *Limited information is scattered across sources, and links between them are inconsistent.*

state-supported, and sees, with relief, a subset of 25 courses from the total list, some with two sections, available for the coming quarter. However, the abbreviated course names are sometimes difficult to decipher and are linked to the full list she had already opened with the same 50 word descriptions.

Wanting some additional guidance, Rachel opens a fourth browser window and navigates to the iSchool menu Academic Programs > MLIS > Current Students. She sees a page with over a dozen links under a heading Student Handbook, among them Degree Requirements, Core IT Requirement, Degree Planning, and Registration. She actually feels relieved at this point that her choices are mostly lock-stepped so she doesn't have to understand all this right now.

SCENARIO 2: CHOICE IS ALL ABOUT TIMING

Tomas has just registered for classes he'll take in the spring quarter of his first year in the UW iSchool's Master of Science in Information Management program. He has chosen two required core courses and one elective for the spring based on the 50-word descriptions he found on the Course Descriptions page of the UW website. With most of his core classes completed, though, he knows he'll have to choose electives that will support his degree and career goals. With so much at stake, he feels pressure to make the best use of his academic effort and tuition expenditure by completing the best possible combination of coursework. Also, he knows that not all courses are offered every quarter, which further limits his choices. He navigates on the iSchool website to Schedules by Quarter. Information is projected only one quarter ahead, but he can look back a year and see that two electives he particularly wants were offered in the current winter quarter, just now ending. He wonders whether he should have taken them then, but maybe they'll be offered again next winter.

Tomas emails his faculty advisor to ask whether those would be good courses for his chosen specialty and if more information is available about when they'll be offered. He catches the professor at a good time, and the reply is quick but disappointing: Yes, those would be the perfect courses for him, but the one faculty member who teaches them will be on sabbatical next year, so they won't be offered as usual. Tomas will have completed his degree before the winter after that, when the courses would be offered again! If only he had known about the timing of these essential courses earlier, maybe he could have taken them instead of the core courses usual for someone at his stage of the program.

SCENARIO 3: WHAT'S NEXT?
Jeremy is two quarters away from completing his B.S. in Informatics at the UW iSchool, and he is Ready. To. Be. DONE! He sees occasional email from a program coordinator at the iSchool about interesting new classes just added to the schedule, but he has already selected his classes, and revising his schedule at this point is just too complicated. And then what? The last thing he wants to do is think about more school, yet he knows he'll be competing in a tight job market with people who have completed MSIM degrees. Should he swallow hard and apply to grad school?

He finds some attractively laid out pages on the iSchool site related to the MSIM program. He looks through suggested courses by specialization, but the 50-word catalog descriptions don't tell him how much would really be new in these classes after his Informatics degree. He knows that more information must be out there, but it doesn't seem to be available in any systematic way.

Scenarios like these convey the effects of a design situation on its stakeholders [1]. These user stories tell a tale of people making decisions important to them while lacking essential information and unable to access more complete, relevant information. They labor in confusion, in part because they are unaware that the information exists at all and in part because it is embedded in a process context that does not directly include them.

## iSchool Curriculum Planning Context

The Information School at the University of Washington (the iSchool) is a partially self-supporting school. Its mission is to prepare information leaders, research the problems and opportunities of information, and design solutions to information challenges. The school has four degree-granting academic programs:

- Bachelor of Science in Informatics
- Master of Library and Information Science (MLIS) – Residential, Online, Law Librarianship
- Master of Science in Information Management (MSIM) – Full-time (day), Part-time (evening/mid-career)
- Ph.D. in Information Science

The Master of Library and Information Science program has two degree modes: a 2-year residential program with in-person classes and a 3-year online program with remote, largely asynchronous classes. Students are admitted to a specific degree mode but can take classes from either mode on a space available basis. The Law Librarianship program has separate admissions and degree requirements. The Master of Science in Information Management program also has two degree options: a 2-year full-time day program and a 2 year part-time, mid-career program targeted to working professionals with evening/weekend classes.

The administration must coordinate course offerings for each of these degrees and programs while working within resource constraints regarding faculty, budget and classroom space on campus.

## Stakeholders and Artifacts

*The University of Washington*
The University of Washington sets high-level standards, processes and policies that constrain decision-making within all schools and departments.

The *UW Time Schedule Office* (TSO) assigns classroom spaces on campus. The iSchool submits requests, along with many schools and departments, for desirable locations at specific times. When a requested time slot is unavailable, the iSchool administration can either propose another time or accept a different location. TSO wants to efficiently and fairly assign classroom spaces.

The *UW Curriculum Committee* approves course designations, credits, naming and descriptions submitted by the iSchool. Most submissions are approved or require only minor revisions. However, the burden of this approval process causes the iSchool to keep inactive courses listed in the catalog until no chance remains that they will be offered again. The UW Curriculum Committee's goals include uniformity across all three campuses and posting meaningful course designations on catalogs, transcripts and records.

ARTIFACTS
- *UW Course Catalog:* complete list of courses offered at the UW, with official name, credits, 50-word description. The iSchool components of the course catalog are published by the Office of the University Registrar with content drafted by the iSchool and approved by the UW Curriculum Committee. Individual faculty members can add links in the course catalog to instructor course descriptions. These links often remain after the content is no longer current. The course catalog is available publically on the UW website and linked from the iSchool site.
- *UW Time Schedule:* complete listing of course sections offered during a particular quarter, with times and locations for residential classes, prerequisites and enrollment restrictions. Most listings specify instructors, some added after the time schedule is first published. The quarterly time schedules are available publically on the UW website and linked from the iSchool site.

*iSchool Administration*
The iSchool Administration manages the school's course offerings. Administrators must submit new courses for

approval to the UW Curriculum Committee and plan existing course offerings to meet the needs of students in all programs and delivery modes. Related tasks include: soliciting teaching preferences from faculty and assigning teaching responsibilities, negotiating the time and location of residential courses with the UW Time Schedule Office, informing current students of upcoming and projected course offerings, approving and publicizing special topics courses and maintaining curriculum information with input from the faculty and program chairs. The Administration's goals are improving the iSchool's standing relative to peer institutions, maintaining financial stability, hiring and retaining high-quality faculty and recruiting students.

ARTIFACTS

- *Degree Requirements* for each program list courses that students must complete to graduate. The requirements are available publically on the iSchool's website.
- *Projected Course Offerings* provide information on courses projected to be offered during an academic year. These projections are about 90% accurate, but students sometimes complain when actual course offerings do not match projections. Some students want access to projections earlier and covering more than one academic year to aid in their degree planning. The projected course offerings are available publically on the iSchool's website via links on the Schedules by Quarter page.
- *Course Inventory* is a collection of documents that describe the course title, number, prerequisites and credit hours as well as a course justification, catalog description, outline of course topics, assessment mechanisms and suggested readings. These documents are created by the iSchool Administration in conjunction with program chairs, advising boards and faculty. They are updated at the Administration and/or program chairs' discretion. Listings remain substantially

accurate for 2-4 years; the suggested readings sections need the most frequent reexamination. The inventory is available only to iSchool faculty and staff.
- *Course Budget Proposal* is an internal document created by the iSchool Administration 15 months before each academic year and available only to faculty and staff. It outlines courses to be offered two academic years in the future based on budget and stakeholder needs.
- *Skeleton* and *Preferred Course selections* are internal iSchool documents that list intended course offerings for the following academic year and faculty members' preferred assignments within that structure. The documents are used to determine teaching assignments for faculty and identify instructor hiring needs.
- *Course Assignment Plan* is an internal document produced by the iSchool Administration and available only to faculty and staff that records teaching assignments and course offerings for the following academic year. It is proposed 11 months before the start of the academic year it describes and is finalized 9 months ahead.
- *Course Section Archive* is an internal repository for past syllabi that is required by the University and available only to faculty and staff. The iSchool Administration collects syllabi from individual instructors but does not enforce complete compliance.

*iSchool Faculty*
The iSchool's faculty members develop courses that meet the curriculum content standards and participate actively in curriculum content reviews. Their goals include career development and opportunities to research and teach within their areas of interest.

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*Highlighting Course Inventory*

Inventory documents represent a generic "blueprint" for a course. However, while inventories are available to faculty when designing their version of a course, faculty often make many substantial changes in planning for a specific section. Course Inventories are infrequently updated and variance in the content of specific course sections currently limits their utility as curriculum planning tools.

These documents currently exist and are controlled centrally by the iSchool Administration, but contain less accurate and up-to-date information than documents created on a quarter-by-quarter basis by individual faculty members.

ARTIFACTS

- *Public Course Webpages* are available at the discretion of individual instructors. Older course webpage versions are not frequently updated. Some course catalog entries link to public course webpages.
- *Instructor Class Descriptions* are created by individual instructors using a university-wide template. Links infrequently appear in the course catalog and time schedule. Since they can be removed only by the individual instructors, outdated descriptions often appear linked from the course catalog.
- *Course Descriptions* are created by individual instructors for special topic courses and published by the iSchool administration on the iSchool's webpage. Often the time schedule does not link to special topic course descriptions although the administration sometimes sends a selection of them out to students in emails. Course descriptions sometimes arrive after registration planning is complete and information posted, which triggers ad hoc email recruiting and may restrict student enrollment.
- *Syllabi* are documents or websites created for particular class sections by individual instructors. Available only to students registered for the sections, syllabi are the intellectual property of the instructors who create them. Instructors generally share partial or provisional syllabi with individual students upon request, but this information is otherwise unavailable. Some instructors would object to their syllabi being made widely or publically available. Copies of past syllabi are archived by the iSchool administration.

*Students, Current and Prospective*
Current iSchool students select courses each quarter based on degree requirements, course content, instructor preference, and scheduling considerations, including future opportunities to take desired courses. Decisions are all limited to available information gathered from the iSchool and UW websites, individual instructors, program coordinators, staff members and fellow students. Current students want to graduate within their intended timeframes while selecting courses that will support their degree goals.

Prospective students evaluate the quality and fit of iSchool programs in light of their professional goals and in comparison to peer institutions. Prospective students want an accurate impression of the iSchool's culture, curriculum and typical course content.

**Work Models**
Beyer and Holtzblatt define work models as a graphical language used to capture knowledge about work [2]. Contextual inquiry generally yields extensive documentation of a design situation. Work models transform that data into concise artifacts that reveal patterns and facilitate communication among stakeholders without glossing over detail. Based on our contextual inquiry, we created context and flow models.

The context model (appendix, p. 11) indicates influences between stakeholders that affect or constrain work. Influence can include standards, policy, power, values, preferences and habits. Breakdowns that restrict work in particularly harmful ways are indicated by black lightning bolts.

The flow model (appendix, pp. 12-13) represents how work is divided and communication flows among people. Since access to information is central to our design problem, we use color to indicate whether an artifact is public, restricted to current students or limited to faculty and staff.

Our model reveals a constellation of discrete, single-purpose pockets of information with varying limitations on access. Course information available to students is maintained separately from curriculum planning information, resulting in ad hoc, infrequent, and sometimes unreliable updates.

## One Solution: Requirements and Prototype

To solve the problems inherent in the iSchool's system of course information, we propose a substantial consolidation that gathers all information available to current students and the public into a single listing that users can filter based on criteria important to them. Each item links to a single-course detail display that collects relevant information, including links to additional resources. With proper permission management of individual data elements, this display could also serve purposes important to staff and faculty, ensuring a single source of the latest information for all stakeholders.

Our solution recognizes limitations imposed by the iSchool's position within the UW information and technology environment. In particular, registration and quarterly class schedules are determined outside the iSchool, so we consider changes to those interactions outside the scope of our design.

*To-Be Design Scenario: Solid Sources, Smooth Flow*
With Spring registration coming up, Martha is thinking about the big picture for her MLIS degree. She knows that two courses are determined by the iSchool's lockstep sequence. But she's discovered that, even for core classes, the instructor has a huge impact.

Martha visits the iSchool website then selects Course Information > Course List. The full list of all iSchool courses displays, and she chooses a checkbox to list MLIS courses only. For one of her required classes, she has a choice of two instructors, so she clicks on each instructor's name and scans the two faculty profiles that display in new browser tabs.

With a clearer impression of those options, Martha decides to focus on selecting an elective. She clicks the Electives checkbox to display electives only and scans the filtered course names and brief descriptions, paying closer attention to classes with instructors she's liked in previous classes. She notices an archives class taught by a favorite instructor, which has a Video Summary icon. She clicks it and watches a short clip of the

instructor narrating an overview of the class objectives and activities. She's interested, and after closing the video, she clicks the More Information chevron. An expanded summary notes that the course is "Typically offered once per year in Spring quarter." But the listing also indicates a prerequisite that she hasn't taken. She clicks on the prerequisite, and a new tab opens to show detailed information about that class, which indicates that it is "Typically offered once per year in Winter quarter." Martha copies and pastes information about the two courses, the one she wants and its prerequisite, into a file she uses for degree planning under headings for winter and spring next year.

Working through the list of electives, Martha finds some brief listings intriguing, but she wants more specifics. She clicks the linked course names for three possible courses, opening each detail page in a new tab. The single-course displays show the short description from the listing page, along with a summary of course objectives. A few include a short introductory video by the instructor embedded in the page. Further down, the page lists student assessment criteria, linked lists of prerequisites and courses for which the current course is a prerequisite, and even some sample course content. At the bottom of each detail page are links to past course sections, indicating quarter, year, and instructor. Martha clicks a link for the instructor she'd prefer, then reads a pop-up warning that course content from past sections often differs from new content; when she clears the pop-up, the PDF file for a residential class syllabus displays. For another class, a past section link opens not a syllabus but instead a message providing the instructor's email address with an invitation to inquire about the course. Martha writes a brief email to the instructor explaining her interest in the course and asking if the information on the course detail pages will change significantly.

Although she won't make a final decision until she hears back from the instructor, Martha feels good about provisionally choosing this elective.

**Course Inventory Artifacts**

Course number & title
Credit policy (10 char.)
Course description (50 words)
Course status (~10 char.)
Course justification (short text)
Prerequisites (short text)
Course objectives (short outline)
Student assessment (short text)
Quarter scheduled (date)
Typically offered (short text)*
Course content (text, varies)
Sample session topics (outline)
Instructor website (URL)
Instructor statement (text
    and/or video)*
Past section (URL)*

*New
Maintained by staff
Maintained by faculty

*Functional Requirements*

Our design is detailed in complete functional requirements presented in the Appendix. At a high level, our design collects many disparate artifacts currently part of the activity flow into a three-tier Course Inventory:

- Course listing display with title, short description, optional instructor video, and related content elements for all courses eligible to be taught within the iSchool. The user could filter this listing by course characteristics like iSchool program, core/elective requirement, online/residential mode, and quarter offered.

- Expanded course listing with supplemental information such as instructor statement and course objectives.

- Course detail display with full information about the course, including the optional video, student assessment criteria, and more.

- Essential to our design is the requirement to populate all displays and other iSchool reports from a single repository of course information.

This functionality attempts to resolve essential tensions within the process of planning, choosing and teaching classes. Students need reliable information about curriculum offerings over the 2-3 year spans of their degree programs, yet iSchool planning must adapt to many complex contingencies. Administrators and faculty hesitate to offer tentative information, in case students use it as the basis for long-term, high-stakes decisions, only to be disappointed by inevitable changes. Many students consider tentative information better than no information, yet they voice frustration if their planning must adapt to updates. Additionally, the information most relevant to students registering for a single upcoming quarter differs from that needed for long-term degree planning.

Faculty now work to bridge this information gap by encouraging informal, ad hoc contact via email or in person. Students seldom seek out course information in this way, however, and if all students were to do so, faculty resources would be severely strained. Further, the information freely shared in such sessions, such as a syllabus from a past section currently under revision, could be routinely shared with current students with minimal additional maintenance burden simply by entering a URL and choosing an option to enable access. Authentication requirements to access syllabi could address faculty members' concerns about access to their intellectual property. Ad hoc communication is a sustainable strategy only for special cases; the persistent information problem needs a more stable, structural solution to provide essential information without heavy maintenance requirements.

Our solution attempts to resolve these tensions mainly by collecting existing artifacts within a single, accessible resource. We add only four elements: a short statement on the typical timing of course offerings maintained by staff and three potentially added by faculty at their discretion: a short instructor text statement, a video or audio statement, and a URL for past section information (website or PDF syllabus). Staff may be charged with maintaining syllabus links, but faculty should determine availability to users to control the intellectual property of their course designs.

The rest of the information is currently produced but spread among five or more document artifacts. Much of it is repeated in multiple artifacts, and all of it is updated separately and therefore often infrequently. Since all information in our solution would flow from a single repository, the burden on administration and faculty for maintenance would be reduced and focused, encouraging timely updates and actually saving staff and faculty time now spent changing text in multiple sources and responding to ad hoc requests. Reports against the same repository could be formatted to meet additional requirements for iSchool course information and administrative tasks, maximizing accuracy and flexibility of reporting while minimizing update chores.

Both degree planning and single-quarter registration would benefit from a smooth flow between course listings, basic or expanded, and highly detailed single-course displays. Students still could seek answers from faculty and staff, but they would already understand the basics, encouraging better-informed curriculum planning conversations within the iSchool.

*Prototype*
The appendix shows wireframe images of our interface design prototype. A default listing page shows basic information about all iSchool courses, plus a filtering tool to define manageable subsets of the whole list. Each item would allow expanded display with highly relevant information about sections scheduled, course objectives, and instructor summaries. Ability to expand a basic listing has the potential to answer most questions within a single display. For more complex queries, each course title would link to a single-course detail page with full information, routinely updated within a single repository.

## Usability Test Plan
To test our prototype, we recruited students in each of the iSchool's programs, except the PhD. students, who have highly individualized needs. We chose one member of the residential MLIS program, since it incorporates both residential and online classes. We also recruited one MSIM student and one Informatics student to indicate whether those groups exhibit different information seeking behavior or have different information needs.

The appendix presents a complete protocol for test subjects based on our task analysis of an iSchool student researching course options. We presented the tasks as questions to guard against giving prescriptive instructions highlighting the features we are trying to test. Instead, we expected to elicit responses indicating whether students choose the functions within our design that we expected would meet their course information needs.

*Test Results*
All three subjects selected from the listing page filter box when asked to identify an elective in their program for the winter quarter, solidly validating that core element of our design. All expressed basic satisfaction with the screen labels, including the heading Requirement for the Core/Elective facet. One noted the lack of a Submit button, suggesting that the list would repopulate with the filter applied as each checkbox was chosen. We had not considered that behavior of the design, and it would have to be part of implementation planning. Another respondent noted that selecting checkboxes for both Core and Elective would repeat the default listing behavior and recommended a radio button with options All /Core/Elective instead.

The task of investigating one course elicited varying responses. Two subjects immediately clicked on the course name in the list display to reach the detail display. The third clicked the More information link for an expanded listing and moved to the detail display only when firmly prompted. He then expressed great surprise that the full information included would differ at all from the expanded listing, and he considered that a weakness in our design. Our solution emphasized three tiers of progressively more detailed information, but all test users expressed a clear preference for two – one listing level and one detail level, either on a separate display or expanded within the listing.

Two subjects chose video information first, while the third expressed a strong preference for text. The availability of the same video on both listing and detail display seemed redundant to users. The subject from the MLIS program preferred text, while the MSIM and Informatics student favored video, suggesting a high potential for varying preferences in information format among the application's user community. One response to this design challenge might be extensive use of show/hide functionality, especially on large, potentially intimidating text blocks, to allow a visually lighter display that would be easily configured by the user.

Two subjects with long experience in the iSchool placed strong emphasis on information about instructor selection and resulting variation in course content. Each carefully investigated faculty web pages during testing, especially for those scheduled to teach a course of interest. One looked first for an instructor's specific statement about a course and stressed its importance in attracting the right community of students to register. Both also said they would consult fellow students informally for information about instructors that they would not expect to find in iSchool resources.

Our task of choosing a course section seemed to stymie two subjects, at least momentarily, while the third immediately investigated instructors as a basis for that choice. No subject seemed to recognize our attempt to represent course timing, and the schedule by quarter remained a focus for that information. All agreed when prompted that timing of future offerings would be useful in course displays. A design response might involve building section timing information into options within the well-accepted listing filter box.

All subjects expected highly accurate information, and one would actively avoid the application if he were in doubt. He noticed language in our expanded listing that a course was "typically" offered in winter and took that as a solid indication it would be available this winter; a pop-up disclaimer about possible schedule changes would make tentative information acceptable to him, however.

Neither of the two master's level students, one just beginning and one nearly finished, had completed much degree planning. All subjects emphasized near-term registration decisions in their information search. When prompted, subjects were willing to simply review course headings in a comprehensive listing to weigh options. The Informatics subject expressed a desire for a Tracks filter option to group courses by that program's specializations.

With these varying results among only three respondents, more testing clearly would be needed.

Possibly more general surveys of potential users could effectively guide initial design decisions, such as which content elements might be most useful to students selecting courses.

## Conclusion

Management of course information within the iSchool is a large and extremely complex challenge. The current fragmented arrangement has emerged over time to satisfy a wide range of divergent needs, some of them in tension with one another. All sides want to make available accurate information, subject to varying requirements in completeness, access, output format, and update burden.

Testing validated important elements of our effort to achieve that goal. Students strongly favored centralization of course information in one place with predictable formatting and tools for filtering and selection. They favor a two-tier display architecture simpler than what we originally envisioned. That finding probably would reduce effort for any implementation.

We anticipate that faculty and staff would benefit, as well. They could interact with a single repository in a predictable workflow that builds easy updates into their routine of course preparations. This effort would meet student needs without the burden of adding extensive new information, focusing instead on small tasks of keeping existing resources up to date and letting technology facilitate routine output selection and formatting. Many students would eagerly welcome additional video and text-based statements from instructors about the classes they teach. Faculty could expect some reward for this effort in the form of more engaged communities of students who have made well-informed commitments to coursework.

**Appendix**
*Context Model: iSchool Curriculum Planning and Course Registration Information Prototype Wireframes*

*Activity Flow Model: iSchool Curriculum Planning and Course Registration Information*
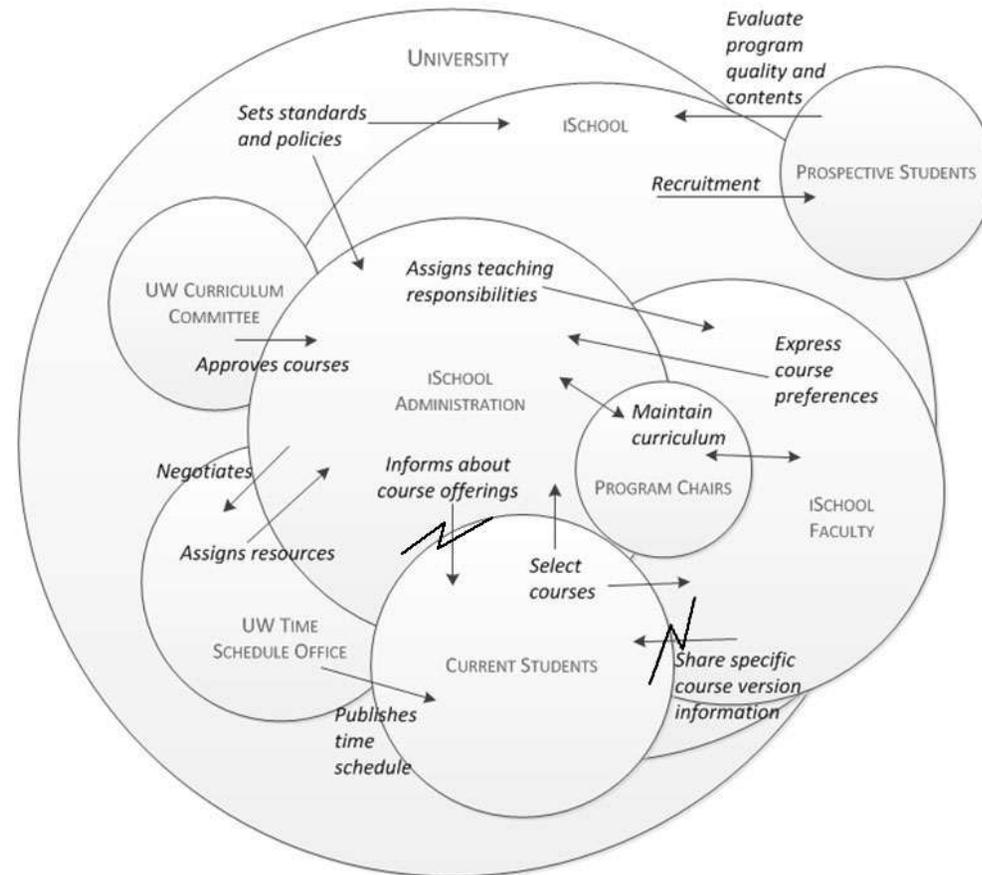
*Revised Activity Flow Model*

The context for our solution remains as it was, so we have not updated that model. This update of our flow model illustrates the collection of information from a range of artifacts important to iSchool processes in a single, consolidated location for reference by students and other stakeholders. A single repository would enabling the work of updating curriculum information with output in multiple formats appropriate to specific needs.
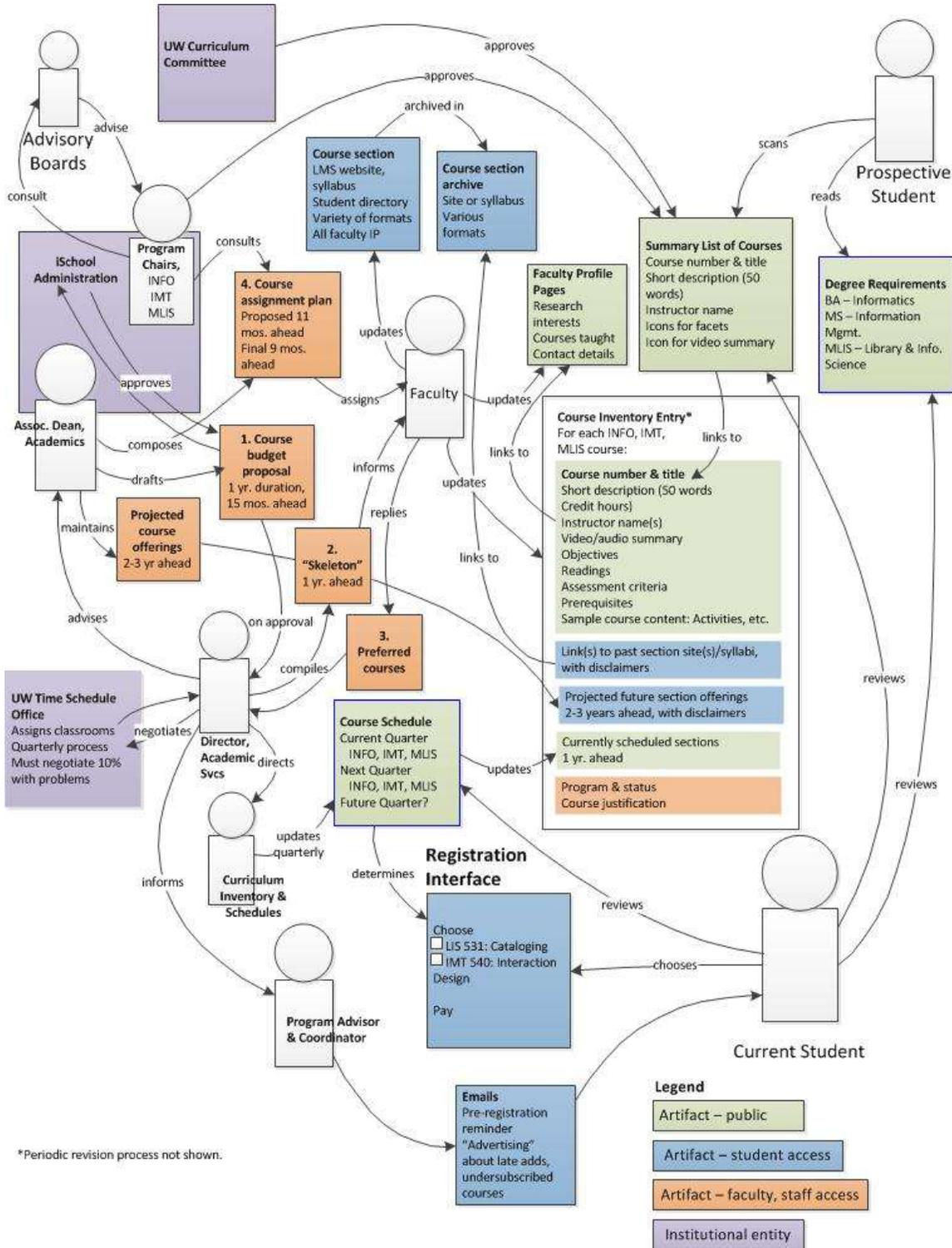
*Complete Functional Requirements*
This outline summarizes our detailed list of functional requirements for the solution.

1. Organizational requirements
    1.1. Staff and faculty of the iSchool must maintain a single database or other repository of all information about courses offered.
    1.2. The repository must be updated to reflect decisions made in the process of quarterly and annual curriculum review and planning.
    1.3. Instructor information remains in the existing structure of individual profile pages, which faculty are expected to update at least annually and preferably quarterly in advance of student registration periods.
    1.4. All course information distributed via the website – in UW curriculum planning processes and to other stakeholders – must be drawn from the same repository and formatted for the end purpose to ensure delivery of consistent and current data.
    1.5. Course titles on quarterly time schedules and other official documents must link only to the single-course display and not to any instructor website or other source of information not maintained as described in these requirements.
2. Course listings
    2.1. The iSchool website must display a listing of all courses offered and omit any not currently taught.
    2.2. Full listing must give options to allow the user to filter according to relevant criteria and display a subset of courses:
        a. program within the iSchool: INSC, MLIS, MSIM, INFX, Informatics
        b. electives vs. core courses
        c. online vs. residential delivery mode
        d. Default display is All Courses.
        e. All filtered displays must be URL-addressable to allow direct links to those subsets of iSchool courses.
    2.3. Each item in the course list must display relevant information about one iSchool course, including course number, title, credit hours, description, instructor name, online/residential delivery mode, video summary if available, and how frequently it is offered.
    2.4. Each course listing must include a "+ Show More " link allowing user to expand the basic listing in 2.4 to add the following information, if available:
        a. meeting times, if available for a residential course
        b. a list of course objectives
        c. an instructor note with free-text expanded description, if available
    2.5. Each course listing must link to a single-course display for that course
3. Single-course display
    3.1. Elements in the single-course display must be available to a suitable audience with a need for the information and appropriate access per iSchool policy: staff/faculty only, logged-in current students, public.
    3.2. Information displayed must communicate effectively its expected accuracy, with prominent disclaimers for information that may change during curriculum planning or in specific quarters or years or for specific instructors' sections.

3.3. The course information display must give the course number and title as they appear in the official iSchool repository, along with the information from the Course Inventory such as basic description, course objectives and content, and assessment methods, plus:

    a.    names of instructors who teach the course linked to their iSchool faculty profile pages

    b.    embedded video, audio, or other media explaining the course (only where faculty have prepared the content and authorized public display)

    c.    any prerequisite relationships: short lists with titles linked to those single-course displays; one list is prerequisites for this class, if any, and a separate list links to any courses for which this class is a prerequisite.

    d.    links to past section syllabi/websites: Only for users logged in with staff/faculty or current student permissions, the display must list quarter and year plus instructor name for up to five past sections, most recent first.

POSSIBLE NEXT-PHASE REQUIREMENTS

Future development of the course information display may implement refinements:

➢ Filtering by Track to group courses on similar topics

➢ User-specific myTrack collecting courses the individual selects for possible registration

➢ The iSchool's deliverables to UW curriculum lists (e.g., the full course catalog and quarterly time schedules) could be extracted as reports against the same repository, formatted for those specific purposes.

➢ An alert function of some kind might be built into the course list to replace occasional emails notifying students about new or updated course information. If such an update could optionally trigger an email to student lists, that traffic might continue, but such updates also would be consolidated in the single, authoritative listing, rather than spreading essential information among webpages and staff emails, as currently happens.

*Prototype: Course Listing, Basic*



Home » Course Information » MSIM » Winter

# Winter 2011 – MSIM Courses     ● Expand All

**IMT 525** Information Management and Technology in Sports **(3)** Ⓦ ✓📱
Explores the information perspective, including the role and the use
of information, information management, and information
technologies applied to the sports context. Examines modern and
emerging information management and technology systems and their design and
use in administering intercollegiate athletic functions.
   ▶ More Information                    Instructor: MICHAEL EISENBERG

**IMT 530** Organization of Information Resources **(4)** Ⓦ
Introduction to issues in organization of information and information objects
including analysis of intellectual and physical characteristics of information
objects; use of metadata and metadata standards for information systems;
theory of classification, including semantic relationships and facet analysis;
creation of controlled vocabularies; and display and arrangement.
   ▶ More Information            Instructors: RACHEL CLARKE, MICHAEL DOANE,
                                                              JIN HA LEE

**IMT 550** Policy, Law, and Ethics in Information Management **(4)** Ⓦ
Select concepts, processes, and issues related to the organizational contexts
within which information professionals practice. Topics include information as
public/private good, intellectual property, privacy, confidentiality, information
liability, and information policy. Focus on contemporary issues affecting the role
of the information manager.
   ▶ More Information                    Instructor: RICARDO GOMEZ

■ **Filter by:**
Program
   ☐ INFO
   ☐ MLIS
   ☑ MSIM
   ☐ INSC
   ☐ INFX
Requirement
   ☐ Core
   ☐ Elective
Mode
   ☐ Residential
   ☐ Online ✓📱
Quarter
   ☐ Fall Ⓕ
   ☑ Winter Ⓦ
   ☐ Spring Ⓢ
   ☐ Summer Ⓢ
■ Tracks

*Prototype: Course Listing, Expanded*

*Prototype: Course Detail*

## IMT 525 Information Management and Technology in Sports (3)

Course Objectives - Course Content - Examples Class Topics
Student Assessment - Past Syllabi/Course Websites

**Catalog Description**
This course brings together doctoral students, faculty and members of the iSchool community in discussions on topics relating to the professional concerns of doctoral students and their future lives as academics and researchers. May be repeated for credit.

**VIDEO**

**Grading:** Credit/No Credit

**Prerequisites:** Permission of instructor.

**Course Objectives**
By the end of the course, the student will have:
• Learned essential survival skills for the various stages of a doctoral student's program;
• Gained a deeper understanding and appreciation for what life will be like as a faculty member and researcher;

**Course Content**
One faculty member will be responsible for scheduling topics. In general, topic selection is driven by students who are signed up for credit in the course. It is possible for multiple sections of INSC 561 to be scheduled depending on faculty willingness and availability, and on student demand.

**Examples of class session topics:**
• Research
• Teaching
• Service

**Student Assessment**
Participation.

**Past Syllabi/Course Websites**
Winter 2010 - Eisenberg
Winter 2009 - Eisenberg

Course Status: New Course

Course Justification
The iSchool is committed to educating successful future researchers and academics. It recently received a grant from the Institute of Museum and Library Services that included the development of an....

*Task Analysis and Test Protocol*

1. Can you find an elective for Winter Quarter in your program? [in filter, winter is not checked but degree program is]
2. How would you investigate 537? Expected responses:
   a. Play the video
   b. Instructor
   c. More information
   d. Title link
   e. [expand all]
   f. [filter box]
3. How would you choose which section of the class to take?
4. If More Info: Can you determine when this course will be offered next?
5. Which order of content sections would be most helpful? Do you feel you have enough information to make a decision about enrolling in this or not? How would you find out more about the course? Expected *Responses:*
   a. Instructor
   b. Full View
6. If *Full* Info: Which of these content pieces help you make a registration decision? Do you feel you have enough information to make a decision about enrolling in this or not? How would you find out more about the course?
7. [return to landing page] You are now working on degree planning. Where would you go for information?

DEBRIEF QUESTIONS

Did the label "Requirement" for the Core and Elective choices in the list filtering function make sense to you? How accurate do you expect the information in the course listing and detail displays to be?
Ask about any element they didn't use:

o Did you notice it?

o What do you think it would do?

o What would it be helpful for, if anything?

*Citations*

[1] Carroll, J. M. (1999). Five reasons for scenario-based design. In HICSS '99: *Proceedings of the thirty-second annual Hawaii International Conference on System Sciences*, Volume 3, 3051.

[2]  Beyer, H., & K. Holtzblatt (1998). *Contextual design: Defining customer-centered systems.* New York: Morgan Kaufmann Publishers.

[3]  Pruitt, J., & Grudin, J. (2003). *Personas: practice and theory*. Proceedings of the 2003 conference on Designing for user experiences (pp. 1–15).

## Acknowledgements