NC STATE UNIVERSITY

Master of Science in Technical Communication Program Management Portal

User Interface Design Document

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About this Document

This User Interface Design Document (UIDD) is produced as a deliverable for the ENG 675 Projects in Technical Communication.

The UIDD describes the user interfaces and semantics of the proposed *MS in Technical Communication Program Management Portal.* It documents enough of the system user interface design to allow its primary users to understand overall system behavior. The primary users of this document will be Dr. Stan Dicks, the MS in Technical Communication Program Administrator, and Dr. David Covington, Associate Professor representing Technical Communication in the re-design of NCSU's College of Humanity and Social Sciences (CHASS) Web site.

The primary use of the document by Dr. Dicks, as Program Administrator for the MS in Technical Communication program, will be to assess the design in terms of its ability to: simplify the program administrator's job, enhance the MS students' graduate school experience in terms of registering each semester and tracking their progress through the program, and streamline the faculty's program work, primarily in the area of course management.

The primary use of the document by Dr. Covington will be to assess the design in terms of its integration potential within the CHASS Web site redesign, its implementation feasibility in terms of skills needed to develop the code, and interface dependencies on other university systems.

Dr. Covington has identified further potential uses of the document:

- 1. He could use the document to some extent in his role as the Project Manager to help manage the development of the portal.
- 2. In meeting with other participants in the redesign of the CHASS Web site, this document could strengthen the credibility and highlight the commitment of our department with regards to the redesign and the kinds of things we're envisioning in the Technical Communication department to enhance our own departmental Web site.
- 3. There is potential to create a template from this document to use in managing Web site change or enhancement requests within the Technical Communication Department. That is, when a faculty member wants to commission a project from Dr. Covington he might ask them to create such a document for the project, as it is a good way to ensure that everything about a project that needs to be considered is in fact addressed.

An additional use of the document by either Drs. Dicks or Covington could be to use the *Graphical User Interface* section of the document to create a "paper usability test."

This document is also intended to provide information to any organization that might be responsible for maintaining and servicing the portal after its implementation and release.

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1. User Environment

My objective is to document the design of a *Program Management Portal* that will, through automation, streamline the scheduling and advising process for the administrator of the MS in Technical Communication program (hereafter referred to as "the program") at North Carolina State University (NCSU), as well as for the students enrolled in the program. The role-based design of the portal will also support a streamlining of course management tasks by the faculty of the program.

As the portal evolves, a long-term goal would be for it to help design the right program to best meet the skill needs of students and to best accommodate their future ambitions.

1.1 Design Overview

Managing one's way through the MS program is, at best, a chore. For the student, the advising sessions are paperbased, involving information retrieval from a variety of disparate sources; the elective cluster concept is not integrated into scheduling, and students often question whether or not an elective meets program requirements and whether it's a theory or application course.

For the administrator, the student advising and scheduling process is a manual one, eligible course assessment requests can be prolific and often redundant, and there isn't a good way to broadcast the results of completed course assessments to the students. For the MS faculty, there is a lack of visibility to the projected need of required courses in order to plan their availability for the subsequent semester (e.g., knowing how many students are planning to take ENG 515 next semester).

The portal will be role-based, and will consist of three entry points: student, program administrator, and faculty. Once the portal is accessed in a particular role, the tasks presented will be tailored to the respective audience. A needs analysis survey for each audience determined the tasks included in each entry point.

1.2 Audience

The goal of the persona is to describe the prototypical users' background, environment in which they will be using the product, how they would like to experience the product, and the tasks that they need to complete using the product.

There are three primary personas in this design: a student, the program administrator, and faculty.

1.2.1 Student Persona



"I want Dr. Tucker to approve my schedule, and give me my PIN so I can register for next semester."

– Juan Muñoz

Juan is a 27-year-old, second-semester student in the MS program. He's working full-time while pursuing his degree in the evenings. He hopes that a degree in Technical Communication will help him to obtain his professional goals sooner than he might otherwise.

Juan's priorities are his children, then work, *then* graduate school. Typically, he is planning his graduate school registration and preparing for his meeting with his advisor from home late at night a day or two before he is to meet with his advisor.

Juan's Experience Goals

- To register for his courses quickly and efficiently
- To access a minimum number of resources to complete registration
- If at all possible to avoid a trip to campus to register

Juan's End Goals

- To find out which courses are being offered this semester that meet his needs in terms of required courses vs. elective courses and when they will be offered (i.e., day and time)
- To find out if an elective course meets the requirements of the program, as well as its designation as an application course or a theory (or method) course
- To obtain approval of his proposed schedule, which will allow him to receive his PIN in order to complete registration

Juan's Context (Day in the Life) Scenario

Environmental setting:

Juan is accessing the Internet at his desk in his work office, or from his personal desktop or laptop machine at home. While at work, his officemate may or may not be present when he chooses to check on his school scheduling or progress, but he generally tries to do it when he is alone in the office. At home, he may or may not be interrupted by his wife or children, but he generally tries to do it after his children are put to bed. Juan generally has a scratch pad or sticky notes available on which to jot ideas and things to-do, but there is a scattering of those all about both his desk at work and at home.

At the beginning of each academic year, Juan marks his electronic calendar with the university's registration schedule, but generally waits until he receives a reminder e-mail from his advisor indicating the date that registration opens before beginning to schedule his courses for the semester.

Juan is asked to stop by his advisor's office and sign up for a 15-minute advising session, during which his proposed schedule will be approved and he will be given his personal identification number (PIN), without which he cannot register.

- 1. Today, Juan has received said e-mail.
- 2. Tomorrow after class on campus, he stops by his advisor's office and signs up for an advising slot on the calendar hanging on the advisor's office door.
- 3. The day before his meeting with his advisor, Juan accesses his transcripts from the university's Registration and Records system to get a snapshot of his progress-to-date in the program
- 4. He accesses the MS program's Web site to remind himself of the elective requirements—it's 9 hours of application courses and 9 hours of theory (or method) courses, but there's also some other combination that you can do. He can never remember how it goes.
- 5. He looks at the schedule of courses being offered this semester, first looking at the required course offerings, and then for the electives.
- 6. He sees one course that he thinks would count in the program, but he's not sure, so he accesses the MS program's Web site to check to see if it's on the "Approved Electives" list.
- 7. He sees the course on the list, but he is not sure if it counts as an application course or a theory (or method) course.
- 8. He sends an e-mail to his advisor to find out.
- 9. He finds another elective that he would like to take, and thinks he's heard a fellow student say they took it and it counted, but since he's not sure, he sends an e-mail to his advisor to find out if it's an eligible course, and if so, if it's an application or theory (or method) course.
- 10. Juan writes down the classes he'd like to take, and waits to either hear back from his professor on his questions, or figures that he'll get the answers at his advising session.

With his questions answered, his schedule approved, Juan receives his PIN, and then registers for the semester that night when he gets home and has some found time.

1.2.2 Program Administrator Persona



"I want my advising sessions with the students in the program to be carried out in the most efficient manner—resulting in a pleasant experience for *both* of us."

- Dr. Sam Tucker

Sam is a 48-year-old Associate Professor in the English department, and the Director of its Master of Science in Technical Communication program. As its director, he is charged with managing 35-45 graduate students as they progress through the degree program. The management includes keeping a Plan of Work for each of them, as well as advising each of them on a semester-by-semester basis as they enroll for the upcoming semester. In addition to his role as Director, he teaches two courses per semester.

His professional activities generally include membership in two to four professional societies, as well as participating in Special Interest Groups, refereeing journals, and editing articles or journals. He is a long-standing

member of the professional chapter of the Society for Technical Communication—in the capacity of Educational Liaison, and he is the Faculty Advisor to the NCSU student chapter of the Society for Technical Communication.

Sam's priorities are his family, his directorship, his teaching, and then his professional activities. Registration each semester is an especially challenging time for him as he works to schedule advising sessions with 30-40 students, as well as responding to numerous requests about course eligibility, course status as application or theory/methods electives, and course scheduling needs. This is in addition to his need to prepare for the courses he is going to teach.

Sam's Experience Goals

- To carry out advising sessions feeling that each student was given the time and attention they needed
- To minimize the paperwork and manual processes associated with advising and tracking student progress in the program
- To have a minimal amount of work to do outside the portal to become "audit ready" in terms of students' Plans of Work requirements

Sam's End Goals

- To advise each student each semester to ensure a course of study that meets the requirements of the program
- To assess eligible courses for the program in an efficient and timely manner
- To keep each student's Plan of Work up-to-date

Sam's Context (Day in the Life) Scenario

Environmental setting:

Sam is in his office preparing for the beginning of the new semester. After checking the progress of 7 new students applying for admission into the program this semester, he starts on the tasks associated with advising and scheduling:

- 1. Sam looks at the courses being offered in other departments to determine their eligibility as elective courses in the MS in Technical Communication program.
- 2. Once determined, he sends an e-mail to the currently enrolled students, providing the list, and announcing the open date of registration, and an encouragement to sign-up for an advising session with him, using a sign-up sheet on his office door.
- 3. The day before, or the day of, Sam reviews the Plan of Work of the student(s) in anticipation of his advising session(s) that day. To do so, he must go upstairs to get the students' paper files, where the plans of work are kept. The office in which they are kept is locked after 5:00pm.
- 4. During the advising session, he reviews the Plan of Work with the student, checks the student's course request(s) for this semester, and provides the student a PIN if he approves of the schedule.
- 5. He updates the student's Plan of Work record with the new courses.

1.2.3 Faculty Persona



"I'm teaching ENG 512 next semester, and I wonder how many students are planning to take it then."

- Dr. Suzanne Stacy

Suzanne is a 45-year-old Associate Professor in the English department. In addition to teaching classes in the MS in Technical Communication program, she is the Coordinator of the English Department's Internship in Writing and Editing. As its coordinator, she meets individually with each student to determine that student's career aspirations. Together, she and the student identify organizations in which the student might like to work.

Her professional activities generally include membership in two to four professional societies, as well as refereeing and editing professional journals.

Suzanne's priorities are her family, her teaching, and then her professional activities.

Suzanne's Experience Goals

- To feel prepared for this semester's courses
- To feel good about the number of students planning to take courses she is teaching next semester

Suzanne's End Goals

- To know the number students taking the courses she is teaching next semester
- To have completed a checklist of items to prepare for the courses being taught this semester

Suzanne's Context (Day in the Life) Scenario

Environmental setting:

Suzanne is in her office preparing for the beginning of the new semester.

- 1. Check the current enrollment numbers for the courses she's teaching.
- 2. Create a syllabus for the courses she's teaching, or retrofit one from a previous semester.
- 3. Put books on reserve for this semester's courses.
- 4. Request to stock course books in the NCSU book store.

1.3 User Requirements

Requirements were obtained by surveying current students enrolled in the MS in Technical Communications program, the current program administrator, and the current faculty teaching in the program—each audience responding to a similar survey, but one customized to their potential tasks.

The surveys contained suggested tasks, and the potential users were asked to rate them as either Unnecessary, Optional/Don't Care, Optional/Would Like, or Necessary. Following that, they were provided space in which to write in other requirements they might have.

Each requirement was assessed for acceptance, deferral, or rejection, using the respective criteria below. Details associated with each of the requirements summarized here can be found in Appendix A.

Acceptance/Deferral/Rejection Criteria

Accept

- Existing content can be used
- Highly rated as a user requirement
- Easy to implement
- Registration management-related

Defer

- Content needs devising
- Less highly rated as a user requirement, or needs rating by more users
- Moderately difficult to implement
- Less registration management-related (e.g., more course management-related)

Reject

- Policy or procedure conflict or violation
- Privacy issues
- User requirement rated as unnecessary

Requirement ID Legend

- RS = Student Requirements
- RPA = Program Administrator Requirements
 - RF = Faculty Requirements

1.3.1 Accepted Requirements

Accepted requirements are requirements that should be included in the first release of the portal.

ID	Description	
RS-1	Contains a link to the MS in Technical Communication Web site.	
RS-2	Contains a link to the NCSU Academic Calendars and Exam Schedules Web page.	
RS-3	Contains an explanation of what an "elective cluster" is in the program.	
RS-4	Contains a way to indicate what cluster I'm interested in to help me focus on it during registration time.	
RS-5	Extracts required Technical Communication courses being offered this semester from the course catalog to display in a personal view.	
RS-6	Extracts Technical Communication electives that are in my "elective cluster" being offered this semester from the course catalog to display in a personal view.	

RS-7	Extracts <i>all</i> approved Technical Communication courses being offered this semester from the course catalog to display in a personal view.	
RS-8	Contains a way to indicate interest in next semester's required courses to help the faculty plan enough sections of the course to accommodate student needs.	
RS-9	Contains a way to submit an elective course not currently on the approved list to see if it will meet the program requirements, or whether it is an application or theory course.	
RS-10	Contains a way to receive my PIN code without having to meet in person with my advisor.	
RS-11	Contains a way to have my schedule approved without having to meet with my advisor.	
RS-12	Contains a way to electronically schedule an advising session with my advisor should I want/need one.	
RS-13	Contains a view of my progress-to-date through the program.	
RS-14	In a progress-to-date view, the courses I have taken are separated in terms of required, application, and theory or method courses.	
RS-15	Contains a way to view all electives currently approved in the program, along with a designation as to whether they meet the application, or theory or method, requirement.	
RS-16	Include contact information and optional information on one-on-one counseling sessions with faculty.	
RS-17	Include information on other program registration requirements, such as graduation paperwork.	
RS-18	Along with listing relevant elective coursework, perhaps there could be information of transferable courses from other local universities.	
RS-20	I would also like to see other students' viewpoints on elective courses outside the department— whether they were worthwhile for technical communicators and what areas they cover related to our degree.	
RS-24	Be able to check my account balance to see if my financial aid has appeared and what day it will go through.	
RS-25	To be able to see if books are available yet. Link straight from the course to related books.	
RS-26	To be able to check to see if the professor has a Web site up for the course or if there is an older version of the Web site up for the course.	
RS-27	To be able to visit the professor's personal Web site for more information about a course.	
RS-28	For those of us that go through the MS Program over the course of 4-6 years it would be helpful to have notations next to the classes like: usually offered every spring semester, offered every two years, etc. Sometimes you see a class offered that you might pass on and then wish you had taken it based on the limited availability.	
RPA-1	Provides a way to view a snapshot of a student's current Plan of Work.	
RPA-2	Provides a way to view student schedules that are waiting for approval.	
RPA-3	Provides a way to approve student schedules that are waiting for approval.	
RPA-4	Provides a way to send a student with an approved schedule his or her PIN.	
RPA-5	Provides a way to schedule an advising session should I, or the student, want or require one.	
RPA-6	Provides a way to facilitate an online chat session with a student to handle cases where the automated process isn't enough, but a face-to-face meeting is not necessary.	
RPA-7	Provides a way to view student requests to assess a course as an eligible elective.	

RPA-9	Provides a way to designate a course as an application course or as a theory or method course.	
RPA-10	Provides a way to associate an elective with an elective cluster.	
RPA-11	Provides a way to notify students when a course assessment has been completed.	
RPA-12	Provides a way to update an elective whose designation as an eligible elective, or whose type of elective, changes.	
RPA-13	Provides a way to view student demand for <i>required</i> courses for the semester <i>subsequent</i> to the one for which the student is currently enrolling.	
RPA-15	Provides a link to the MS in Technical Communication Web page.	
RPA-16	Provides a link to the Academic Calendars & Exam Schedules Web page.	
RPA-19	Provide a student task to solicit feedback from previous semester's courses, particularly electives.	
RF-1	View a projection of the number of students planning to sign up for a required course, not for the semester currently being enrolled for, but for the subsequent one.	
RF-3	Help me advertise a course.	
RF-4	Facilitate the creation of a Wolfware page for my course.	
RF-7	Facilitate putting or reminder to put books on reserve.	
RF-8	Facilitate or remind creating syllabi.	

1.3.2 Deferred Requirements

Deferred requirements are requirements that should be considered in a future release of the project or considered for implementation in the PeopleSoft portal. (See Additional Design Points on page 21 for more information.)

ID	Description
RS-19	Include links to an assortment of helpful information, such as style guides, STC information, discussion board, FAQs - that kind of thing.
RS-21	See course scheduling times and determine if they overlap with any other courses you're interested in— like an oracle calendar view where you could see when things overlap, and can view more than two courses at a time.
RS-22	Modified descriptions of courses (so that course descriptions are accurate).
RS-23	A list of other people in the program who have taken available courses (required or electives) and possibly an e-mail contact, and/or a cumulative rating for each course from students, and/or comments from students about each course.
RS-31	I'd like to see a listing of classes from other universities that have transferred into the NCSU MS Technical Communication program, and to see how they are categorized across required, application, and method courses.
RS-32	For each elective cluster, make information available that connects the cluster to either skills or jobs in which taking such courses would be of benefit.
RPA-14	Provides a way to view student demand for <i>elective</i> courses for the semester <i>subsequent</i> to the one for which the student is currently enrolling.
RF-2	Help me create a course description.

RF-6	Facilitate or remind to submit book requests to the NCSU Bookstore.	
RF-9	Management of the proposals, consultations, and oral defenses for ENG 675. Scheduling of the defenses, for example, is a kind of jigsaw puzzle that would be helpful to have assistance with, and then a permanent record of.	
RF-11	To have the ability to send student progress reports to the program administrator.	
RF-12	To archive syllabi from previous semesters for student access.	
RF-13	I would like to have a section where the program administrator can store electronic copies of new MS applications, and an online form that I can use to offer comments on each admissions file.	
RF-14	I would also like a section for alumni to enter a picture, contact information, 675 project (including the actual project where possible), graduation date, and job after the MS program.	
RF-15	It would be interesting to see what courses students are registering for both within the English Department and in other departments. This might help us spot trends that would allow us to make changes to the curriculum.	

1.3.3 Rejected Requirements

ID	Description	
RS-29	To view not only the next semester's course offerings, but also the semester after that. It might help a student plan a bit better.	
RS-30	I want to know at least 1 to 2 weeks in advance if a class I registered for may be in jeopardy of being dropped. An automated e-mail notification would suffice allowing me time to find a backup class.	
RPA-17	Keeping track of applications for the MS program and which ones are complete takes a good bit of time.	
RPA-18	It takes a couple of hours each semester to go through all the course offerings in other departments so as to prepare the list of electives to send to everyone.	
RF-5	Facilitate or remind to submit book requests to the NCSU Bookstore.	
RF-10	To be reminded of add/drop deadlines.	

1.4 Key Path Scenarios

The key path scenarios describe, at the task level, the *primary* actions and paths the personae take through the interface. These are the *main* task paths performed frequently by the personae and important to the personae.

These screen captures, and all screen captures throughout this document, are prototype-only screens.

1.4.1 Student Scenarios



1.4.1.1 View program and faculty information

Persona: Juan Muñoz, student

Description: Juan checks to see how many of his electives must be "application" electives versus "theory or method" electives, and wants to learn a little more about one of the professors in the program.

- 1. Juan signs into the portal in the role of student, and he is presented with the student tasks.
- 2. He selects the "View program and faculty information" option.
- 3. He is offered a link the MS in Technical Communication Web site to check the program requirements, and he is offered a page of links to the e-mail address, Web site (if they have one), and university directory entry for each professor in the program.

1.4.1.2 Schedule classes

Persona: Juan Muñoz, student

Description: Juan checks to see what classes he can take this semester.

- 1. Juan signs into the portal in the role of student, and he is presented with the student tasks.
- 2. He selects the "Schedule classes" option.

3. He is presented first with a list of the required courses being offered in the program this semester. If Juan has chosen an elective cluster, next will be a list of the electives associated with his cluster that are being offered this semester. The final list on the page will contain all other approved electives that are being offered this semester.

1.4.1.3 Help schedule future required courses

Persona: Juan Muñoz, student

Description: Juan indicates the required courses that he'd like to take, not this semester, but next semester in order to help the faculty consider student demand in scheduling.

- 1. Juan signs into the portal in the role of student, and he is presented with the student tasks
- 2. He selects the "Help schedule future required courses" option.
- 3. Juan indicates the he is going to be graduating at the end of next semester, and then indicates that he needs to take ENG 675 and ENG 515 in order to meet the program requirements.

1.4.1.4 View my progress

Persona: Juan Muñoz, student

Description: Juan wants to see how many of the required, application, and theory courses he has respectively completed.

- 1. Juan signs into the portal in the role of student, and he is presented with the student tasks.
- 2. He selects the "View my progress" option.
- 3. A table containing the required courses is presented, populated with the courses he has taken. Next a table listing the application courses he has taken is presented, followed by a table containing the theory (or method) courses he has taken.

1.4.2 Program Administrator Scenarios



1.4.2.1 View a Student's Schedule for Advisement

Persona: Sam Tucker, program administrator

Description: Sam is preparing to meet with a student for an advising session, and wants to review his or her progress-to-date in the program.

- 1. Sam signs into the portal in the role of program administrator, and he is presented with the program administrator tasks.
- 2. He selects the "View a student's schedule for advisement" option.
- 3. From a list of student schedules available, Sam chooses the name of the student for whose advising session he is preparing.
- 4. For the selected student, a table containing the required courses is presented, populated with the courses he or she has taken. Next a table listing the application courses taken is presented, followed by a table containing the theory (or method) courses taken.

1.4.2.2 Review Awaiting Student Schedule Approvals

Persona: Sam Tucker, program administrator

Description: Sam wants to review student schedules submitted to him for approval, after which he can provide the students with a PIN so that they can register.

- 1. Sam signs into the portal in the role of program administrator, and he is presented with the program administrator tasks.
- 2. He selects the "Review awaiting student schedule approvals" option.
- 3. Sam is presented with a list of the students currently under his advisement from which he selects a student of interest.
- 4. He is presented with the a view of the student's progress-to-date to which has been added, and highlighted, the courses being requested to take this semester.
- 5. He approves the schedule electronically, and an e-mail is created addressed to the student to which Sam adds the student's PIN for this semester.

1.4.2.3 Review Course Eligibility Assessment Requests

Persona: Sam Tucker, program administrator

Description: Sam wants to review requests submitted by students to assess a course as to whether it would meet the requirements of the program, and if so, if it would be an application or theory course.

- 1. Sam signs into the portal in the role of program administrator, and he is presented with the program administrator tasks.
- 2. He selects the "Review course eligibility assessment requests" option.
- 3. He indicates his intention to graduate next semester or not, and then he designates, from a list of the required courses, which ones he intends to take next semester.
- 4. Sam is presented with a list of the courses for which a submission has been made, he reviews the course catalog description of each course and decides on its eligibility as an acceptable elective.
- 5. If the course is eligible, he designates it as either an application course or a theory course, and an e-mail is generated to the requestor informing of him or her of the decision.
- 6. If the course is not eligible, he designates it as such, and an e-mail is generated to the requestor informing him or her to the decision.

1.4.2.4 View Next Semester Required Course Projections

Persona: Sam Tucker, program administrator

Description: Sam wants to see the required course projections for next semester in order to begin the planning process as soon as registration is over.

- 1. Sam signs into the portal in the role of program administrator, and he is presented with the program administrator tasks.
- 2. He selects the "Review next semester required course projections" option.
- Sam is presented with a table showing the number of students planning to take each of the five required courses next semester. The table also indicates out of the number requesting, how many need each course to graduate.

1.4.3 Faculty Scenarios



1.4.3.1 Review Next Semester Required Course Projections

Persona: Suzanne Stacy, faculty member

Description: Suzanne is scheduled to teach ENG 515 next semester, and she wants to know how full the class will be.

- 1. Suzanne signs into the portal in the role of faculty, and she is presented with the faculty tasks.
- 2. She selects the "Review next semester required course projections" option.
- 3. Suzanne is presented with a table showing the number of students planning to take each of the five required courses next semester. The table also indicates out of the number requesting, how many need each course to graduate.

2. Compatibility and Coexistence

This design is intended to be compatible and coexist meeting the NCSU Universal Usability Policy, which can be found at: <u>http://www.ncsu.edu/universal.html</u>.

Browser Requirements

Versions Tested: (Major/Minor numbers and operating systems): America Online v6.0; Internet Explorer v4.0, v5.5; Netscape v4.72, v6.01, and; Opera v5.0 Minimum HTML version required: 3.0 Plug-Ins required: none Java use: no JavaScript use: yes JavaScript versions: 1.1 Contains Frames: no Uses Cascading Style Sheets: yes CSS Features: no Uses ActiveX: no Uses Layers: no Uses Cookies: no Uses multiple windows: no

Basic System Requirements

Operating Systems that the site has been tested on: Mac 8.6, 9.2, Win 98, 2000, RedHat Linux 7.0 Input Devices: Mouse requirements: yes Navigable with Keyboard only: yes

Display

Screen Resolution (minimum and recommended): 800 x 600 Designed for fixed width: yes Screen Sizes designed and tested with: 800 x 600, 1024 x 768, 1152 x 864 Hand-held devices supported/tested: no Mobile devices supported/tested: no Presence of alternative depictions: yes Do all non-text messages have text equivalents? yes Font sizes used and tested: yes

Audio

Types of audio output: yes Alternative labels/description or other displays for audio data? yes

Network Connection

Maximum download size per page: 50.64 KB Minimum & recommended connection bandwidth: 56K Network access speeds tested, along with average/expected times for each speed: 56K+

Access for users with disabilities (For detailed conformance to NCSU's commitment to meeting Section 508 guidelines, see Accessibility on page 22.) Text only version of site: yes Alternative browsers supported (and tested): Netscape and Internet Explorer Diverse Users Languages supported: English Languages supported via inline translations: English Tested on both left-right and right-left languages: no Translations supported by Alta Vista translators (Systran): no Education Level Required (grade level): 8th Grade Novice user testing conducted and results: ves Experience required: Browser/Internet-ready users Other internationalization support: none User support E-mail response expectations: yes, via homepage feedback@ncsu.edu Online communities, newsgroups provided: many university-based listservs for faculty and staff FAQ provided: no

Contact Information Webmaster Name, Phone, Email: About this site with homepage_feedback@ncsu.edu

3. Security and Authentication

This design uses the NCSU WRAP web-based authentication mechanism, described at: <u>https://webauth.ncsu.edu/wrap/</u>.

3.1 Authentication

The WRAP Authentication Server (WAS) runs on an SSL-protected webserver, so the user's password is passed to the server through an encrypted connection. The server uses the password to authenticate to our Kerberos system. If the authentication succeeds, the WAS issues an identity cookie that does not contain the user's password or Kerberos ticket in any form.

The WRAP system relies upon the user to choose and safeguard their Kerberos password. Users who have easilyguessed passwords could have their WRAP identities used by a malicious third party.

3.2 Encryption/Cryptography

Creating False Cookies

The WRAP cookie contains an encrypted copy of the users identification data. The encrypted copy is generated through RSAREF encryption using a 768 bit private key. Server software can only decrypt and read this data if they have a copy of the matching public key.

RSAREF encryption is widely accepted to be uncrackable except by brute-force methods. A brute-force attack on a key of this length would take prohibitively long to complete at current computer speeds.

Furthermore, if someone should break our private key, it is a simple matter to generate a new key pair and reissue the new public key to our servers. This may be done on a periodic basis at some point in the future.

For further discussion of cookies, see Privacy on page 54.

3.3 Authorization

Authorizations are restricted by the requirement of a Unity ID.

Task access is restricted by role. For instance, users logged in as students will not have access to the Program Administrator tasks.

4. Interfaces and Semantics

4.1 Design Assumptions

- 1. The majority of the design will be implemented using HTML.
- 2. Programmers will decide on the most efficient programming and scripting languages with which to implement back-end processing, such as the database requirement.
- 3. Programmers might modify the design if policy or technology restrictions result in an inability to implement the design as recommended.
- 4. CHASS Web Standards (<u>http://www.chass.ncsu.edu/it/page.php?name=web_standards</u>) might preclude or override recommended design points.

4.2 Additional Design Points

- 1. NCSU has begun a long-term migration to PeopleSoft's Enterprise Resource Planning product, with which the vision is that each student will be able to customize a portal page. Such a page may offer a more integrated, and therefore more user-friendly way for users to accomplish tasks currently included in *this* design.
- 2. At the time this design might be considered for acceptance, it would be prudent to check the progress of that project to determine the feasibility of implementing in PeopleSoft function described here.
- 3. Consideration should also be given to investigating the possibility and feasibility in PeopleSoft of implementing requirements that are designated as deferred or rejected in this design.
- 4. The Portal Home page (section 4.5.1), each of the main task pages (sections 4.5.2, 4.5.3, and 4.5.4) should have a graphic on them. Lower-level pages have the graphics marked "optional"; however, this should be an "all or none" design point decision. That is, if one lower-level page gets a graphic, they all should. *Note: Not all prototype pages contain a graphic; but again, if the decision is made to include one on lower-level pages, include one even on the pages that don't have one in their prototype page.*
- 5. Each page will contain the following elements in addition to those described in Graphical User Interface on page 25.

Field	Description	
NCSU "brick logo"	Position in upper left or upper right corner. It should be the standard NCSU university logo gif. It should be a link to <u>http://www.ncsu.edu</u>	
Banner	Conform to CHASS Web site look and feel.	
Global navigation	In addition to the brick link to NCSU home, a link to the portal home page, a link to the MS in Technical Communication, a link to the Department of English, and a link to the CHASS Web pages should be present.	

4.3 Dependencies

The initially proposed design had dependencies on accessibility to data in other NCSU university systems, such as *Registration & Records*. This section provides a *description* of the dependencies considered, as well as an *alternate design* considered in case the dependency couldn't be met.

The *resolution* documents the result of a meeting with Business and Technology Applications Analyst, Jon Idol, in NCSU's Registration & Records department.

Terminology clarification:

Course **Catalog**: Contains all courses offered at NCSU regardless of whether they are being offered during the current semester. Access the <u>Course Catalog</u>.

Course Schedule: Contains only courses being offered for a particular semester. Access Course Schedules.

ID: D-1

Description: The "*Schedule classes*" student task has an access dependency on the "Course Schedule" information accessed from: <u>http://www.ncsu.edu/registrar/courses/</u>

Alternate Design: If the data creating this HTML page can't be accessed, then code would have to be written to read the HTML file.

Resolution Description: The Course Schedule files are HTML files built from data hosted on "the mainframe," access to which are not feasible due to "lockdown" status for pending PeopleSoft move. (See Additional Design Points on page 21 for more information.) Use the alternate design.

ID: D-2

Description: The "*View my progress*" student task has a dependency on accessing a student's transcripts. It also has a dependency on building a sort routine to categorize each course retrieved from the transcript as a required course, an application elective, or a theory (or method) elective.

Alternate Design: Access student transcripts while they are WRAP-authenticated to pull the course numbers that they've completed to build their personal view. Alternately, populate this information into a local database.

Resolution Description: The transcripts data is hosted on "the mainframe," access to which would not be feasible due to "lockdown" status for pending PeopleSoft move. (See Additional Design Points on page 21 for more information.) Use the alternate design.

ID: D-3

Description: The "View faculty information," "Choose elective cluster," "Schedule classes," "Help schedule future required courses," "View eligible course electives," and "Request a course assessment for program eligibility" student tasks; the "Review awaiting student schedule approvals," "Review course eligibility assessment requests," "Add/Delete/Modify eligible courses," and "View next semester required course projections" program administrator tasks, and the "Advertise a course" faculty task have a local database dependency.

Alternate Design: There is no alternative design for this dependency.

Resolution Description: A local database needs to be created for use by the portal.

ID: D-4

Description: The results screen of the "*View a student's schedule for advisement*" program administrator task has a dependency on a system that shows all advisees assigned to the Program Administrator.

Alternate Design: The local database being built for D-3 would have to contain this information, which could be manually entered by an administrative assistant.

Resolution Description: The interface here would be through the current system used by the Program Administrator to assess his or her advisees.

4.4 Accessibility

NCSU is committed to meeting Section 508 guidelines for Web page accessibility. The requirements affect this design in the following way:

Guide- line	Description	Pages (by section) for Consideration
508(a)	A text equivalent and descriptive alternative shall be provided.	All Pages
	(Use "alt" text attribute or "longdesc" long descriptions attribute to describe images, graphics, audio or video	

Guide- line	Description	Pages (by section) for Consideration
	clips, Java applets, or Flash files. For more information about creating accessible images, see <u>http://www.webaim.org/techniques/imates</u> .)	
508(b)	Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	No Pages
	Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	
508(c)	(Combine some other method of identification with the use of color—examples: add text labels, and make links underlined as well as colored). Avoid red/green and blue/yellow combinations. Make sure sufficient contrast is provided.)	All Pages
	Documents shall be organized so they are readable without requiring an associated style sheet.	
508(d)	(Style sheets may be used for layout, but the document still must be understandable when the style sheet is turned off. Use external style sheets as opposed to internal or in-line styles.)	All Pages
508(e)	Redundant text links shall be provided for each active region of a server-side image map .	No Pages
508(f)	Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	No Pages
508(g)	Row and column headers shall be identified for simple data tables . (Properly mark up column and row heading cells with the tag, and use the "scope" attribute to associate the header text with every cell in that column or row. For more information about coding for simple data tables, see	 4.5.2.1.2 View Faculty Information 4.5.2.3 Schedule Courses 4.5.2.5 View My Progress 4.5.2.6 View Eligible Course Electives 4.5.3.3 Review Course Eligibility Requests 4.5.3.4 Add/Delete/Modify Eligible Courses 4.5.3.5 View Next Semester Required Course Projections
508(h)	http://www.webaim.org/techniques/tables/data.php#th.) Markup shall be used to associate data cells and header cells for complex data tables —those that have two or more logical levels of row or column headers.	No Pages
508(i)	Frames shall be titled with text that facilitates frame identification and navigation.	No Pages
508(j)	Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	All Pages
	(Consider flashing or flickering elements that can be introduced through animated GIFs, Java applets, or third-party plug-ins or applications. Animation intervals should be 3 seconds or more to reduce the risk of	

Guide- line	Description	Pages (by section) for Consideration
	optically-induced seizures. Avoid the use of the <blink> and <marquee> tags.)</marquee></blink>	
508(k)	A text-only page , with equivalent information or functionality, shall be provided to make a Web site comply with the standards, when compliance cannot be accomplished in any other way. The content of the text- only page shall be updated whenever the primary page changes.	No Pages
	(In this design, compliance can be met without generating a separate, text-only page.)	
	When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.	
508(I)	(This especially applies to "fly-out" menus. Make sure that elements are keyboard accessible. In addition to onMouseOver and onMouseOut, use onFocus and onBlur. Provide alternative standard links for links activated only by JavaScript. Use <noscript> tags to identify the function of the script. Do not use onChange in form select drop-down menus. For more information about using scripts, see http://www.webaim.org/techniques/javascript.)</noscript>	4.5.2 Student Tasks 4.5.4 Faculty Tasks
508(m)	When a Web page requires that an applet , plug-in , or other application be present on the client system to interpret page content, that page must provide a link to a plug-in or applet that complies with Section 508(a) through (I).	No Pages
508(n)	When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues. (Use the <label> tag to mark specific elements as labels.</label>	 4.5.2.2 Choose Elective Cluster 4.5.2.3 Schedule Classes 4.5.2.4 Help Schedule Future Courses 4.5.2.7 Request a Course Assessment 4.5.3.2 Review Awaiting Student Schedule 4.5.3.3 Review Course Eligibility Assessment
	The "for" attribute of the <label> tag must match the "id" attribute of the <input/> tag. For more information about creating accessible forms, see <u>http://www.webaim.org/techniques/forms/controls.php</u>.)</label>	 4.5.3.4 Add/Delete/Modify Eligible Course 4.5.3.4.1 Add a New Eligible Elective 4.5.3.4.2 Modify or Delete an Elective 4.5.4.1 Advertise a Course
	A method shall be provided that permits users to skip navigation links.	
508(o)	(Place a link at the beginning of the navigation that goes to an anchor at the beginning of the content area. For more information about ways to create links to skip navigation menus, see <u>http://www.webaim.org/techniques/skipnav/</u> .)	All Pages

Guide- line	Description	Pages (by section) for Consideration
	When a timed response is required, the user shall be alerted and given a sufficient time delay and a way to indicate that more time is required.	
508(p)	(Many forms, when they "time out" automatically, also delete whatever data has been entered, not allowing the user to complete the form. A person's disability can require them to need extra time. Consider making an un- timed version if possible.)	No Pages

4.5 Graphical User Interface

This section describes the GUI interactions with the personae, including details on semantics of the interface, field values, button behaviors and data content. Significant details are documented to make it clear what the behaviors and persona interactions will be for each function.

4.5.1 Portal Home



Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Student</td><td>Link should take user to <u>WRAP authentication</u>, and then to the Student Tasks screen (section 4.5.2).</td></tr><tr><td>Program Administrator</td><td>Link should take user to <u>WRAP authentication</u>, and then to the Program Administrator Tasks screen (section 4.5.3).</td></tr><tr><td>Faculty</td><td>Link should take user to <u>WRAP authentication</u>, and then to Faculty Tasks screen (section 4.5.4).</td></tr><tr><td>Graphic</td><td>Should suggest multi-user, integrated portal, such as the one of the multinational hands in the prototype above.</td></tr></tbody></table></title>	

4.5.2 Student Tasks



Associated Requirements: RS-2, RS-20, RS-24, RS-25, RS-26, RS-28, RPA-19

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(l), 508(o)

Associated Key Path Scenario: 1.4.1.1, 1.4.1.2, 1.4.1.3, 1.4.1.4

Miscellaneous Comments: 508(I) relevance: JavaScript used for rotating image.

Field	Description
HTML <title></td><td>Program Management Portal - Student Tasks</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>View Program & Faculty Information</td><td>Link should open a lower-level HTML page (section 4.5.2.1) from which to view the program and faculty information.</td></tr><tr><td>View Academic Calendars & Exam Schedules</td><td>Link should open a new browser and display the Academic Calendars Web page: <u>http://www.ncsu.edu/registrar/calendars/</u>.</td></tr><tr><td>Choose Elective Cluster</td><td>Link should open a lower-level HTML page (section 4.5.2.2) containing the definition and purpose of clusters, and a way to click on one of the 6 existing clusters, or an option that says, "I'm not interested in declaring a cluster at this time." End the page with a "Submit" button.</td></tr><tr><td>Schedule Classes</td><td>Link should open a lower-level HTML page (section 4.5.2.3) from which to schedule classes.</td></tr><tr><td>Project Future Required Courses</td><td>Link should open a lower-level HTML page (section 4.5.2.4) from which students will indicate what required courses they want to take not this, but <i>next</i>, semester.</td></tr><tr><td>View My Progress</td><td>Link should open a lower-level HTML page (section 4.5.2.5) from which to view his or her progress-to-date in the program.</td></tr><tr><td>View Eligible Course Electives</td><td>Link should open a lower-level HTML page (section 4.5.2.6) from which to view his or her progress-to-date in the program.</td></tr><tr><td>Request a Course for Eligibility</td><td>Link should open a lower-level HTML page (section 4.5.2.7) from which to view his or her progress-to-date in the program.</td></tr><tr><td>Check Wolfware Courses</td><td>Link should open a new browser and display the Wolfware System Web page: <u>http://courses.ncsu.edu/</u>.</td></tr><tr><td>Check My Financial Aid Status</td><td>Link should open a new browser and display the Office of
Scholarships and Financial Aid Web page:
<u>https://www3.acs.ncsu.edu/finaid/scripts/sec/geninfo.pl</u>.</td></tr><tr><td>Access the NCSU Bookstore</td><td>Link should open a new browser and display the NCSU Bookstore
Textbook Web page:
<u>http://www.fis.ncsu.edu/ncsubookstores/textbooks.html</u>.</td></tr><tr><td>Take Personal Notes</td><td>Link should open a text file (e.g., notepad, textpad, or Word) to allow user to make personal notes about courses.</td></tr></tbody></table></title>	

Field	Description	
Provide Semester-end Feedback	Link should open a new browser and present a form designed after the Semester-end Feedback on Elective Course Taken Web page: <u>http://ceres.cals.ncsu.edu/surveybuilder/Form.cfm?</u> <u>testID=3865</u> .	
Graphic	Should be rotating photographs of current students in the program or of "generic" students.	

4.5.2.1 View Program and Faculty Information



Associated Requirements: RS-1, RS-18 Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(o)

Associated Key Path Scenario: 1.4.1.1

Field	Description
HTML <title></td><td>Program Management Portal – View Program & Faculty Information</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>View MS in Technical
Communication Program
Requirements</td><td>Link should open a new browser and display the Master of Science in
Technical Communication Web page:
<u>http://www.chass.ncsu.edu/english/msprog/source.html</u></td></tr></tbody></table></title>	

Field	Description
View Graduation Paperwork Requirements	Link should open a lower-level HTML page (section 4.5.2.1.1) from which to choose links to the pertinent paperwork.
View Faculty Information	Link should open a lower-level HTML page (section 4.5.2.1.2) from which to view e-mail, Web site, and directory information about the faculty.
View Transfer Course Equivalencies	Link should open a new browser and display the Transfer Course Equivalencies Web page: <u>http://www.fis.ncsu.edu/UGA/course.htm</u>
Graphic (Optional)	Should suggest program and faculty information.

4.5.2.1.1 View Graduation Paperwork Requirements



Associated Requirements: RS-17 Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – View Graduation Paperwork Requirements</td></tr></tbody></table></title>	

Field	Description
Logo, Banner, Navigation	See Additional Design Points (section 4.2, item 5, on page 21).
Patent Agreement (Word format)	Link should open the Word-formatted Patent Agreement document: http://www.fis.ncsu.edu/grad_publicns/gars_forms/patent_agreement.doc
Patent Agreement (PDF format)	Link should open the PDF-formatted Patent Agreement document: http://www.fis.ncsu.edu/grad_publicns/gars_forms/patent_agreement.pdf
Option B Graduation Checkout (Word format)	Link should open the Word-formatted Graduation Checkout document: http://www.fis.ncsu.edu/grad_publicns/gars_forms/optb_req.doc
Option B Graduation Checkout (PDF format)	Link should open the PDF-formatted Graduation Checkout document: http://www.fis.ncsu.edu/grad_publicns/gars_forms/optb_req.pdf
Graphic (Optional)	Should suggest graduation paperwork or requirements.

4.5.2.1.2 View Faculty Information

David Covington	E-mail	Web Site	Directory	Request Meeting
Stan Dicks	E-mail	Web Site	Directory	Request Meeting
Brent Faber	E-mail	Web Site	Directory	Request Meeting
Susan Katz	E-mail	Web Site	Directory	Request Meeting
Carolyn Miller	E-mail	Web Site	Directory	Request Meeting
Jason Swarts	E-mail	Web Site	Directory	Request Meeting

Chris Anson	<u>E-mail</u>	Web Site	Directory	Request Meeting
Michael Carter	<u>E-mail</u>	Web Site	Directory	Request Meeting
Nancy Penrose	<u>E-mail</u>	Web Site	Directory	Request Meeting
David Rieder	<u>E-mail</u>	Web Site	Directory	Request Meeting
Catherine Warren	<u>E-mail</u>	Web Site	Directory	Request Meeting

Associated Requirements:	RS-12, RS-16, RS-27
Applicable Dependencies:	D-3
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(g), 508(j), 508(o)
Associated Key Path Scenario:	1.4.1.1

Field	Description
HTML <title></td><td>Program Management Portal – View Faculty Information</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>E-mail</td><td>Link should be coded as mailto: RespectiveFacultyEmailAddress@unity.ncsu.edu.</td></tr><tr><td>Web Site</td><td>Link should be coded as URL to respective faulty member's Home Page.</td></tr><tr><td>Directory</td><td>Link should be coded as URL to respective faulty member's search results page when putting their name in the directory: <u>http://www.ncsu.edu/directory/</u></td></tr><tr><td>Graphic (Optional)</td><td>Should suggest information about faculty.</td></tr></tbody></table></title>	

Choose Elective Cluster 4.5.2.2

communication. You can think of selecting one as indicating an are	ertain area of ea of <i>specialization.</i>
<i>Elective clusters are optional.</i> Those who prefer not to specialize related graduate courses offered by other departments, including or psychology, computer science, business, graphic design, public active procession of the statement of the st	communications,
Selecting a cluster here is going to cause courses in that cluster to view, which will help to ensure, that come registration time, you ar being offered in your cluster for that semester.	
Your elective cluster area of interest can be changed at any ti interested in selecting an elective cluster, simply exit the page	
Set your elective cluster by clicking on your area of interest, and the	
like to see the elective courses currently approved for a cluster, cl	
like to see the elective courses currently approved for a cluster, cl below.	
like to see the elective courses currently approved for a cluster,	
like to see the elective courses currently approved for a cluster,	
ike to see the elective courses currently approved for a cluster,	
like to see the elective courses currently approved for a cluster, cluster, cluster. Web Design and Development Environmental Communication Health/Medical Communication Industrial Communication Information Systems Communication	
like to see the elective courses currently approved for a cluster, clubelow.	
 Web Design and Development <u>Environmental Communication</u> <u>Health/Medical Communication</u> <u>Industrial Communication</u> <u>Information Systems Communication</u> 	

Associated Requirements: RS-3, RS-4

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(n), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – Choose Elective Cluster</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Web Design and Development</td><td>Link should open a new browser and display the Web Design and
Development associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Web</u></td></tr></tbody></table></title>	

Field	Description
Environmental Communication	Link should open a new browser and display the Environmental Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Environmental</u>
Health/Medical Communication	Link should open a new browser and display the Health/Medical Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Medical</u>
Industrial Communication	Link should open a new browser and display the Industrial Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Industrial</u>
Information Systems Communication	Link should open a new browser and display the Information Systems Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Organizational</u>
Agricultural Communication	Link should open a new browser and display the Agricultural Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Agricultural</u>
Submit button	The submit button should associate the selected cluster to the user in a student record in a local database.
Graphic (Optional)	Should suggest a clustering of courses or an "information arc."

4.5.2.3 Schedule Classes

Select the courses you intend to register for this semester, and click on "Submit" below to submit to your advisor for approval.

Required Courses Available This Semester

ENG 517 001 ADV TECH WRIT & ED status:open credit hour:3.0 total class size:15 non-rstr seats avail:7 days:M W time:0730-0845PM instr:S DICKS bldg:TOMPKINS m:00109 rstr seats avail:0 wait list avail:N/A Add Course to Schedule

ENG 515 001 RHET SCI & TECH status:clos credit hour:3.0 total class size:15 non-rstr seats avail:0 days: T H time:0600-0715PM instr:C MILLER bldg:<u>WINSTON</u> rm:00020 rstr seats avail:0 wait list avail:N/A 0 seats restricted available:CLASS=DR OR GR OR MR

0 non-restricted seats available Add Course to Schedule

Web Design and Development Cluster Courses Available This Semester

<u>COM 487 001</u> **INTERNET & SOCIETY** status:rest credit hour:3.0 total class size:30 non-rstr seats avail:0 days: T H time:1015-1130 instr:A DE SOUZA bldg:<u>CALDWELL</u> m:0G108 rstr seats avail:7 wait list avail:N/A 7 seats restricted available:DEPARTMENTAL APPROVAL REOUIRED 0 non-restricted seats available Add Course to Schedule

COM 487 002 INTERNET & SOCIETY status:rest credit hour:3.0 total class size:30 non-rstr seats avail:0 days: T H time:1145-0100PM instr:A DE SOUZA bldg:CALDWELL nn:00212 rstr seats avail:2 wait list avail:N/A 2 seats restricted available:DEPARTMENTAL APPROVAL REQUIRED 0 non-restricted seats available Add Course to Schedule

Associated Requirements: RS-4, RS-5, RS-6, RS-7, RS-10, RS-11

Applicable Dependencies: D-1, D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(g), 508(j), 508(n), 508(o)

Associated Key Path Scenario: 1.4.1.2

Field	Description
HTML <title></td><td>Program Management Portal – Schedule Classes</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Add Course to
Schedule Button</td><td>Extract the course identifier (e.g., COM 487), the name of the course and the number of credit hours from the selected record.</td></tr><tr><td>Submit button</td><td>Store course identifier, course name and number of credit hours in student's database record, and set flag to alert Program Administrator of schedule approval awaiting.</td></tr></tbody></table></title>	

Field	Description
Graphic (Optional)	Should suggest scheduling of classes.

4.5.2.4 Help Schedule Future Required Courses

I plan to graduate next semester.	Peck .
○ Yes	Tracks
O No	
I would like to take the following required course(s) ne click submit):	xt semester (check all that apply, and then
ENG 512 Theory and Research in Professional	Writing
ENG 515 Rhetoric of Science and Technology	
ENG 517 Advanced Technical Writing and Edit	ing
ENG 518 Publication Management for Technic	al Communicators
ENG 675 Projects in Technical Communication	2
Submit	

Associated Requirements:	RS-8
--------------------------	------

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(n), 508(o)

Associated Key Path Scenario: 1.4.1.3

Field	Description
HTML <title></td><td>Program Management Portal – Help Schedule Future Required Courses</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>ENG 512 Theory and Research
in Professional Writing</td><td>Link should open a new browser and display the list of required courses in the program:
http://www.chass.ncsu.edu/English/msprog/course_descriptions.html#A</td></tr></tbody></table></title>	

Field	Description
ENG 515 Rhetoric of Science and Technology	Link should open a new browser and display the list of required courses in the program: http://www.chass.ncsu.edu/English/msprog/course_descriptions.html#A
ENG 517 Advanced Technical Writing and Editing	Link should open a new browser and display the list of required courses in the program: http://www.chass.ncsu.edu/English/msprog/course_descriptions.html#A
ENG 518 Publication Management for Technical Communicators	Link should open a new browser and display the list of required courses in the program: http://www.chass.ncsu.edu/English/msprog/course_descriptions.html#A
ENG 675 Projects in Technical Communication	Link should open a new browser and display the list of required courses in the program: http://www.chass.ncsu.edu/English/msprog/course_descriptions.html#A
Submit button	If graduation indicated, set Grad=1; otherwise set Grad=0. Set ENG512=1 if checked, set ENG515=1 if checked, set ENG517=1 if checked, set ENG518=1 if checked, and set ENG675=1 if checked. For each not checked, set respective counter to 0. Update master counters in database.
Graphic (Optional)	Should suggest projecting future courses or helping with planning.
4.5.2.5 View My Progress

Ē

Required Courses Taken (15 Hours)		
Code	Name	Hours
ENG 512	Theory and Research In Professional Writing	3
ENG 515	Rhetoric of Science and Technology	
ENG 517	Advanced Technical Writing, Editing and Document Design	3
ENG 518	Publication Management for Technical Communicators	3
	Projects in Technical Communication	
ENG 675	Projects in Technical Communication	
	Projects in Technical Communication Elective Courses Taken (9 or 12 Hours) Name	Hours
Application	Elective Courses Taken (9 or 12 Hours)	Hours 3
Application Code	Elective Courses Taken (9 or 12 Hours) Name	

Associated Requirements:	RS-13, RS-14
Applicable Dependencies:	D-2
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(g), 508(j), 508(o)
Associated Key Path Scenario:	1.4.1.4

Field	Description
HTML <title></td><td>Program Management Portal – View My Progress</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>View-only page.</td><td>Links may be provided to course by course code and/or course name. All required courses
should be listed with those not taken included and indicated, at a minimum, by a blank or
zero value in the "Hours" column. Though not shown, the third table for "Theory or Method
Elective Courses should also be populated.</td></tr></tbody></table></title>	

Field	Description
Graphic (Optional)	Should suggest a progress report.

4.5.2.6 View Eligible Course Electives

e e e e e e e e e e e e e e e e e e e	TECHNICAL COR Program Manage	
	Sort by College Sort by Name Sort by Ty	pe
College	Name	Туре
- A -		
AC 470	Agricultural Communication	(Application)
AC 570	Special Topics in Agricultural Communication	(Application)
- B -		
BUS 462	Marketing Research (App	
BUS 465	Advertising and Promotion Management (Theory)	
BUS 480	Business Policy and Strategy (Theory)	
BUS 504	Technology, Law, and the Internet (Application)	
BUS 510	Managing the Digital Enterprise (Application)	
BUS 530	Managing People in the High Tech Environment (Theory)	
BUS 540	Information Technology for Managers (Theory)	
BUS 543	DataBase Management (Application)	
BUS 560	Marketing Management and Strategy (Theory)	
BUS 562	Research Methods in Marketing (Application)	

Associated Requirements: RS-15

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(g), 508(j), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – View Eligible Course Electives</td></tr></tbody></table></title>	

Field	Description
Logo, Banner, Navigation	See Additional Design Points (section 4.2, item 5, on page 21).
Sort by college	Resort and re-display the list by college.
Sort by name	Resort and re-display the list by name.
Sort by type	Resort and re-display the list by type.
Graphic (Optional)	Should suggest checking eligible courses.

4.5.2.7 Request a Course Assessment for Program Eligibility

	MASTER OF SCIENCE IN TECHNICAL COMMUNICATION
	Program Management Portal
I would like to know if this couse can program, and if so, if it's an application course.	
Enter course code (e.g., ENG 675):	Theory or Method

Associated	Requirements:	RS-9
------------	----------------------	------

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(n), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – Request a Course Assessment for Program Eligibility</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr></tbody></table></title>	

Field	Description
Submit button	Check submitted course code against database entries of already assessed courses, including those already assessed as ineligible, for match. If found, return information here. If not found, queue request to Program Administrator for course assessment.
Graphic (Optional)	Should suggest assessment requests.

Program Administrator Tasks 4.5.3



Associated Requirements:	RPA-5, RPA-6, RPA-15, RP-16
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(j), 508(o)
Associated Key Path Scenario:	1.4.2.1, 1.4.2.2, 1.4.2.3, 1.4.2.4

Field	Description
HTML <title></td><td>Program Management Portal – Program Administrator Tasks</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>View Program & Faculty Information</td><td>Link should open a lower-level HTML page (section 4.5.2.1) from which to view the program and faculty information.</td></tr></tbody></table></title>	

Field	Description
View Academic Calendars & Exam Schedules	Link should open a new browser and display the Academic Calendars Web page: <u>http://www.ncsu.edu/registrar/calendars/</u> .
View a Student's Schedule for Advisement	Link should open a lower-level HTML page (section 4.5.3.1) from which to view student schedules.
Review Awaiting Student Schedule Approvals	Link should open a lower-level HTML page (section 4.5.3.2) from which to schedule classes.
Review Course Eligibility Assessment Requests	Link should open a lower-level HTML page (section 4.5.3.3) from which students will indicate what required courses they want to take not this, but <i>next</i> , semester.
Add/Delete/Modify Eligible Courses	Link should open a lower-level HTML page (section 4.5.3.4) from which to view his or her progress-to-date in the program.
View Next Semester Required Course Projections	Link should open a lower-level HTML page (section 4.5.3.5) from which to view the tabulated results calculated from the master counters updated by the "Help Schedule Future Required Courses" (section 4.5.2.4) page.
Schedule an Advising Meeting	Link should open to program administrator's (i.e., advisor's) calendaring system, potentially on WebCT.
Initiate an Advising Meeting Using Online Chat	Link should open to program administrator's (i.e., advisor's) chat system, potentially on WebCT.
Graphic	Should be a photograph of the current Program Administrator or suggest a "generic" Program Administrator.

4.5.3.1 View a Student's Schedule for Advisement



Associated Requirements:	RPA-1
Applicable Dependencies:	D-4
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(j), 508(o)
Associated Key Path Scenario:	1.4.2.1

Field	Description
HTML <title></td><td>Program Management Portal – View a Student's Schedule for Advisement</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Student name</td><td>Link should open the lower-level HTML page (section 4.5.2.5) associated with the selected student.</td></tr><tr><td>Graphic (Optional)</td><td>Should suggest student advising.</td></tr></tbody></table></title>	

4.5.3.2 Review Awaiting Student Schedule Approvals

	NC STATE UNIVERSITY
	MASTER OF SCIENCE IN TECHNICAL COMMUNICATION
	Program Management Portal
The following schedules are awaiting a	pproval:
John Martin	
O Approved [sends e-mail to student w/PI	N]
O Not approved [sends e-mail to student	w/explanation]
Kim Rothwell	
O Approved	
O Not approved	
Submit	

Associated Requirements:	RS-10, RS-11, RPA-2, RPA-3, RPA-4
Applicable Dependencies:	D-3
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(j), 508(n), 508(o)
Associated Key Path Scenario:	1.4.2.2

Field	Description
HTML <title></td><td>Program Management Portal – Review Awaiting Student Schedule Approvals</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Student name</td><td>Link should open the lower-level HTML page (section 4.5.2.5) associated with the selected student with courses selected on Schedule Classes page (section 4.5.2.3) incorporated and highlighted.</td></tr><tr><td>Submit button</td><td>For each student's schedule marked "Approved," send an e-mail to them with their PIN included. For each student's schedule marked "Not approved," send an e-mail to them with the reason for not approving.</td></tr><tr><td>Graphic (Optional)</td><td>Should suggest reviewing and approving a schedule or general approval of thing or idea.</td></tr></tbody></table></title>	

4.5.3.3 Review Course Eligibility Assessment Requests

PA 640	Elective Cluster Association:
 Application Theory or Method This course is not eligible as an elective. 	 This course is not associated with a cluster. <u>Web Design and Development</u> <u>Environmental Communication</u> <u>Health/Medical Communication</u> <u>Industrial Communication</u> <u>Information Systems Communication</u> <u>Agricultural Communication</u>
PE 108	Elective Cluster Association:
 Application Theory or Method 	O This course is not associated with a cluster.
 Theory of Menod This course is not eligible as an elective. 	O Web Design and Development
o mis course is not capito as an electre.	O Environmental Communication
	O Health/Medical Communication
	Industrial Communication
	Information Systems Communication
	O Agricultural Communication

Associated Requirements:	RPA-7, RPA-8, RPA-9, RPA-10, RPA-11
Applicable Dependencies:	D-3
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(g), 508(j), 508(n), 508(o)
Associated Key Path Scenario:	1.4.2.3

Field	Description
HTML <title></td><td>Program Management Portal – Review Course Eligibility Assessment Requests</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Course code</td><td>Link should open a new browser and display the associated course's description in the Course Catalog Web page:
http://www2.acs.ncsu.edu/reg_records/crs_cat/directory.html.</td></tr></tbody></table></title>	

Field	Description
Web Design and Development	Link should open a new browser and display the Web Design and Development associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Web</u>
Environmental Communication	Link should open a new browser and display the Environmental Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Environmental</u>
Health/Medical Communication	Link should open a new browser and display the Health/Medical Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Medical</u>
Industrial Communication	Link should open a new browser and display the Industrial Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Industrial</u>
Information Systems Communication	Link should open a new browser and display the Information Systems Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Organizational</u>
Agricultural Communication	Link should open a new browser and display the Agricultural Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Agricultural</u>
Submit button	For each course indicating either Application or Theory (or Method), add a record into the local database indicating its designation and associate it with its cluster if one is indicated. Send an e-mail to the requester noting that the elective is approved, and provide its designations as application or theory (or method) and cluster association if there is one. For each course designated as not eligible, create an entry in the database designating it ineligible.
Graphic (Optional)	Should suggest course assessment for eligibility.

4.5.3.4 Add/Delete/Modify Eligible Courses

I would like	to:	
Add a new	course.	
Modify or o	lelete an existing course—find the course below and click on it.	
C I	Sort by College Sort by Name Sort by Type	The following
College	Name	Туре
- A -		
AEE 311	Communication Methods and Media	(Application)
AEE 611	Special Topics in Agricultural Communications	(Application)
- B -		
BUS 462	Marketing Research	(Application)
BUS 465	Advertising and Promotion Management	(Theory)
BUS 480	Business Policy and Strategy	(Theory)
BUS 504	Technology, Law, and the Internet	(Application)
BUS 510	Managing the Digital Enterprise	(Application)

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(g), 508(j), 508(n), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – Add/Delete/Modify Eligible Courses</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Add a new course</td><td>Link should open a lower-level HTML page (section 4.5.3.4.1) from which to add a new eligible elective course.</td></tr><tr><td>Course code</td><td>Link should open a lower-level HTML page (section 4.5.3.4.2) from which to modify or delete an existing eligible elective course.</td></tr><tr><td>Graphic (Optional)</td><td>Should suggest the act of adding, modifying, and deleting.</td></tr></tbody></table></title>	

4.5.3.4.1 Add a New Eligible Elective Course

Department Prefix: (Click for valid prefixes.)	
Course Number:	
Course Title:	
Elective Cluster Association:	
O This course is not associated with a cluster.	
O Web Design and Development	Add
O Environmental Communication	Ada
O Health/Medical Communication	Course Information
O Industrial Communication	<u>u</u>
O Information Systems Communication	ANALS (PS: 0
O Agricultural Communication	The second s
Course Type:	
O Application	
○ Theory of Method	
Add Course	

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(n), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – Add a New Course</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Department prefix</td><td>Link should open a new browser and display the Course Catalog Web page: http://www2.acs.ncsu.edu/reg_records/crs_cat/directory.html</td></tr><tr><td>Web Design and Development</td><td>Link should open a new browser and display the Web Design and
Development associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Web</u></td></tr><tr><td>Environmental Communication</td><td>Link should open a new browser and display the Environmental
Communication associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Environmental</u></td></tr><tr><td>Health/Medical Communication</td><td>Link should open a new browser and display the Health/Medical
Communication associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Medical</u></td></tr></tbody></table></title>	

Field	Description
Industrial Communication	Link should open a new browser and display the Industrial Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Industrial</u>
Information Systems Communication	Link should open a new browser and display the Information Systems Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Organizational</u>
Agricultural Communication	Link should open a new browser and display the Agricultural Communication associated electives at Web page: <u>http://www.chass.ncsu.edu/english/msprog/elective.html#Agricultural</u>
Add course button	Add a record to the local database for this course and its designations.
Graphic (Optional)	Should suggest the act of adding.

4.5.3.4.2 Modify or Delete an Existing Eligible Elective Course

Department Prefix: COM
Course Number: 487
Course Title: Internet & Society
Elective Cluster Association:
Web Design and Development
O Environmental Communication
O Health/Medical Communication
O Industrial Communication
O Information Systems Communication
O Agricultural Communication
O This course is not associated with a cluster.
Course Type:
O Application
 Theory of Method
Submit Changes Delete Course

Associated Requirements:	RPA-12
Applicable Dependencies:	D-3
Applicable Accessibility Requirements:	508(a), 508(c), 508(d), 508(j), 508(n), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal – Modify or Delete an Existing Eligible Elective
Course</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>Department prefix</td><td>Link should open a new browser and display the Course Catalog Web page:
http://www2.acs.ncsu.edu/reg_records/crs_cat/directory.html</td></tr><tr><td>Web Design and Development</td><td>Link should open a new browser and display the Web Design and Development
associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Web</u></td></tr><tr><td>Environmental Communication</td><td>Link should open a new browser and display the Environmental Communication
associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Environmental</u></td></tr><tr><td>Health/Medical Communication</td><td>Link should open a new browser and display the Health/Medical
Communication associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Medical</u></td></tr><tr><td>Industrial Communication</td><td>Link should open a new browser and display the Industrial Communication
associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Industrial</u></td></tr><tr><td>Information Systems
Communication</td><td>Link should open a new browser and display the Information Systems
Communication associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Organizational</u></td></tr><tr><td>Agricultural Communication</td><td>Link should open a new browser and display the Agricultural Communication
associated electives at Web page:
<u>http://www.chass.ncsu.edu/english/msprog/elective.html#Agricultural</u></td></tr><tr><td>Submit Changes button</td><td>Update the changed attributes of the existing record in the local database for the selected course.</td></tr><tr><td>Delete Course button</td><td>Delete the selected course from the local database.</td></tr><tr><td>Graphic (Optional)</td><td>Should suggest the act of modifying or deleting.</td></tr></tbody></table></title>	

4.5.3.5 View Next Semester Required Course Projections



Field	Description
HTML <title></td><td>Program Management Portal – View Next Semester Required Course Projections</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>View-only page.</td><td>The course numbers may have links to their respective course descriptions. The data in this table is calculated from the master counters updated in the "Help Schedule Future Required Courses" (section 4.5.2.4) page.</td></tr><tr><td>Graphic (Optional)</td><td>Should suggest planning or a prediction or projection.</td></tr></tbody></table></title>	

4.5.4 Faculty Tasks



Associated Requirements: RI

RF-1, RF-3, RF-4, RF-7, RF-8

Applicable Accessibility Requirements:

508(a), 508(c), 508(d), 508(j), 508(l), 508(o)

Associated Key Path Scenario: 1.4.3.1

Miscellaneous Comments 508(I) relevance: JavaScript used for rotating image.

Field	Description
HTML <title></td><td>Program Management Portal – Faculty Tasks</td></tr><tr><td>Logo, Banner, Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>View Next Semester Required
Course Projections</td><td>Link should open a lower-level HTML page (section 4.5.3.5) from which to view the tabulated results calculated from the master counters updated by the "Help Schedule Future Required Courses" (section 4.5.2.4) page.</td></tr><tr><td>Advertise a Course</td><td>Link should open a lower-level HTML page (section 4.5.4.1) from which to create an advertisement and submit it to various venues.</td></tr><tr><td>Create a Wolfware Page for my
Course</td><td>Link should open a new browser and display the "Add a Course to Wolfware"
Web page: <u>https://wolfware.ncsu.edu/wrap-bin/admintool</u></td></tr><tr><td>Put Course Books on Reserve</td><td>Link should open a new browser and display the Reserve Request Form Web page: <u>http://www.lib.ncsu.edu/reserves/reqform.html</u></td></tr><tr><td>Help Me Create a Syllabus</td><td>Link should open a new browser from which to authenticate to WebCT Vista and then display the syllabus creation Web page:
<u>https://vistaserver.ncsu.edu/webct/logonDisplay.dowebct</u></td></tr></tbody></table></title>	

Field	Description
Graphic	Should be rotating photographs of current students in the program or of "generic" students.

4.5.4.1 Advertise a Course



Associated Requirements: RF-2

Applicable Dependencies: D-3

Applicable Accessibility Requirements: 508(a), 508(c), 508(d), 508(j), 508(n), 508(o)

Field	Description
HTML <title></td><td>Program Management Portal: Student Tasks</td></tr><tr><td>Logo, Banner,
Navigation</td><td>See Additional Design Points (section 4.2, item 5, on page 21).</td></tr><tr><td>here</td><td>Link should open a new browser and present a form designed after the Course Ad Web page: <u>http://ceres.cals.ncsu.edu/surveybuilder/Form.cfm?testID=2957</u>.</td></tr><tr><td>Submit button</td><td>For each checked venue, submit the form to the contact for that respective venue contact.</td></tr></tbody></table></title>	

Field	Description
Graphic	Should suggest course advertisement or just advertisement in general.

4.6 Related Documents and Resources

MS in Technical Communications Web site: <u>http://www.chass.ncsu.edu/english/msprog/source.html</u> CHASS Web Standards: <u>http://www.chass.ncsu.edu/it/page.php?name=web_standards</u>

4.7 Command Line Support

There will be no command line support in this portal. It will be entirely GUI-driven.

4.8 External Messages

External messages will be devised during the coding phase, when the specific programming and scripting languages, as well as the database technology, is chosen.

4.9 User Assistance Provided

No user-assistance (i.e., context-sensitive on-line help) will be provided with this portal design.

4.10 Publications

No publications will be provided with this portal design.

5. Installation and Configuration

The users will have no installation tasks.

The users may have configuration tasks, depending on the final implementation of the local database that will be created to accommodate this design.

An example of a configuration task for a student might be to populate a progress-to-date table entering in courses already taken in the program. For the program assistant, it might be populating a table with the names of students currently under advisement.

6. Reliability, Availability and Serviceability

6.1 Availability and Reliability

The portal will be as available and reliable as the ncsu.edu Web site.

6.2 Serviceability

The serviceability of the portal will require HTML and other web-based programming skills as per the final implementation of the design.

7. Globalization

This portal will not be developed to meet multi-language translation requirements; therefore, there are no globalization dependencies or concerns.

8. Privacy

8.1 Browser Expiration of a Cookie

The WRAP system issues its cookie without an expiration date, which tells the browser that it should never save the cookie to disk. Therefore, the browser is supposed to destroy its copy of the cookie when the browser program exits.

In addition, the WAS program has the ability to log a user out of WRAP by overwriting their cookie with a logout cookie. This mechanism is provided to allow users of public kiosks the ability to logout of WRAP even if they cannot close the browser. If the user does not logout while using a kiosk, the next user may be able to use the first person's cookie, up to the expiration time of that cookie, as discussed below.

8.2 Stealing a Cookie

The WRAP cookie data can be read by a third party fairly easily. HTTP connections are passed across the network in the clear, so a sniffer could easily grab a user's cookie. In addition, the third party could setup a webserver within the same domain that the cookie is issued, and the user's browser would send their cookie to that server whenever a page was requested from it.

The WRAP cookie contains two items designed to limit cookie's susceptibility to being used by another party. The first is the expiration timestamp. This sets a hard date after which point the cookie is deemed expired and will not be accepted. The second item is the IP address of the machine that connected to the WAS to get the cookie. This address must match the address of the machine that is presenting the cookie as an identification, or the cookie will not be accepted.

Therefore, a third party can only steal and use a cookie if they do so before the cookie has expired, and from the same machine that the user was on when they got the cookie in the first place. The third party may also be able to

reuse another's cookie from another machine if they are able to spoof the IP address of the user's machine, but this is fairly difficult to do.

9. Open Source

There is no intent to use open source code in the development of this portal.

10. Performance and Test Considerations

10.1 Performance

There are no performance considerations for this design. The maximum number of concurrent users is estimated to be between 10 and 15.

Currently there are approximately 50 students in the program, one program administrator, and five faculty members. Of the 50 students under advisement, approximate 25-30 are active students. This, and the asynchronous nature of registration, should preclude any performance issues due to concurrent users.

10.2 Testing Considerations

10.2.1 Accessibility Testing

Test the success in meeting accessibility requirements by testing the site using one or all of the following sites.

10.2.1.1 Cynthia Says

The HiSoftware Cynthia Says portal is a web content accessibility validation solution. It is designed to identify errors in your content related to Section 508 standards and/or the WCAG guidelines. This free tool meant for educational purposes, is an online test which only validates one page at a time.

Online at: http://www.cynthiasays.com/

10.2.1.2 Wave

WAVE is a free, web-based tool to help Web developers make their Web content more accessible. Developed in conjunction with the Temple University Institute on Disabilities, WAVE allows anyone to quickly and effectively evaluate the accessibility of their web content.

Online at: http://www.wave.webaim.org/index.jsp

10.2.1.3 WebXACT

WebXACT is a free online service that lets you test single pages of web content for quality, accessibility, and privacy issues.

Online at: http://webxact.watchfire.com/

10.2.2 Usability Testing

In addition to the standard timing of tasks, I would suggest designing the usability test to specifically consider the following areas.

10.2.2.1 Label Recognition

Are the users surprised at the task they are taken to by a given link description, or do they pretty much find what they expected?

10.2.2.2 Task Order

In simulating registration activities, do the users do the tasks fairly closely to the order in which they are listed? Would they expect/prefer the tasks to be ordered alphabetically, in order of frequency of use, or some other algorithm?

10.2.2.3 Publications

Was there an expectation that this portal would have a User's Guide?

10.2.2.4 Context Sensitive Help

Was there a perceived expectation or need for context sensitive help in the portal?

10.2.2.5 Site Map

Was there a perceived expectation or need for a site map in the portal?

Appendix A

User Requirements Detail

22 students responded to a Student User Requirements Survey, one program administrator responded to a Program Administrator Requirements Survey, and five faculty members responded to a Faculty Requirements Survey.

Each survey had a section in which the users rated requirements provided to them, as to their importance to them with regards to the tasks they might perform with the portal. Following that, they were given an opportunity to write-in anything else they'd like to see the portal do.

The results are reported in order of students, program administrator, and then faculty. For each audience the results of the ratings are first, followed by the write-ins.

Student requirements assessed by 22 students

ID: RS-1			
Description: Contains a li	nk to the	<u>MS in Technical Communication</u> Web si	te.
User Priority:			
Necessary:	20	90.91%	
Optional/Would Like:	1	4.55%	
Optional/Don't Care:	1	4.55%	
Unnecessary:	0	0.00%	
Status: Accepted			

ID: RS-2			
Description: Contains a link	to the NC	<u>SU Academic Ca</u>	lendars and Exam Schedules Web page.
User Priority:			
Necessary:	9	40.91%	
Optional/Would Like:	11	50.00%	
Optional/Don't Care:	2	9.09%	
Unnecessary:	0	0.00%	
Status: Accepted			

Description: Contains an explanation of what an "elective cluster" is in the program.

te what cluster I'm interested in to help me focus on it during re	
	gistration
40.91%	
50.00%	
9.09%	
0.00%	
	50.00% 9.09%

ID: RS-5			
Description: Extracts require catalog to display in a personation		al Communication courses being offered this semester from the co	urse
User Priority:			
Necessary:	18	81.82%	
Optional/Would Like:	4	18.18%	
Optional/Don't Care:	0	0.00%	
Unnecessary:	0	0.00%	
Status: Accepted			

ID: RS-6			
Description: Extracts Techn semester from the course cata		unication electives that are in my "elective cluster" being offered this blay in a personal view.	
User Priority:			
Necessary:	10	45.45%	
Optional/Would Like:	12	54.55%	
Optional/Don't Care:	0	0.00%	
Unnecessary:	0	0.00%	
Status: Accepted			

ID: RS-7

Description: Extracts *all* approved Technical Communication courses being offered this semester from the course catalog to display in a personal view.

User Priority:				
Necessary:	14	63.64%		
Optional/Would Like:	7	31.82%		
Optional/Don't Care:	1	4.55%		
Unnecessary:	0	0.00%		
Status: Accepted				

ID: RS-8			
Description: Contains a way enough sections of the course		e interest in next semester's required courses to help the f modate student needs.	aculty plan
User Priority:			
Necessary:	11	50.00%	
Optional/Would Like:	9	40.91%	
Optional/Don't Care:	2	9.09%	
		0.00%	

ective course not currently on the approved list to see if it will meet the lication or theory course.
9.09%
.0.91%
0.00%
0.00%
1

ID: RS-10			
Description: Contains a way	to receive	my PIN code without having to me	et in person with my advisor.
User Priority:			
Necessary:	12	54.55%	
Optional/Would Like:	6	27.27%	
Optional/Don't Care:	2	9.09%	
Unnecessary:	2	9.09%	
Status: Accepted			

ID: RS-11

Description: Contains a way to have my schedule approved without having to meet with my advisor.

User Priority:				
Necessary:	11	50.00%		
Optional/Would Like:	8	36.36%		
Optional/Don't Care:	1	4.55%		
Unnecessary:	2	9.09%		

ID : RS-12			
Description: Contains a way one.	/ to electro	nically schedule	an advising session with my advisor should I want/need
User Priority:			
Necessary:	7	13.64%	
Optional/Would Like:	12	54.55%	
Optional/Don't Care:	3	13.64%	
Unnecessary:	0	0.00%	

ID: RS-13						
Description: Contains a view of my progress-to-date through the program.						
User Priority:						
Necessary:	15	68.18%				
Optional/Would Like:	6	27.27%				
Optional/Don't Care:	1	4.55%				
Unnecessary:	0	0.00%				
Status: Accepted	Status: Accepted					

ID: R	S-14
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Description: In a progress-to-date view, the courses I have taken are separated in terms of required, application, and theory or method courses.

User Priority:
Necessary: 14 63.64%
Optional/Would Like: 6 27.27%
Optional/Don't Care: 2 9.09%
Unnecessary: 0 0.00%

ID: RS-15

Description: Contains a way to view all electives currently approved in the program, along with a designation as to whether they meet the application, or theory or method, requirement.

User Priority:		
Necessary:	16	72.73%
Optional/Would Like:	6	27.27%
Optional/Don't Care:	9	9.09%
Unnecessary:	0	0.00%

Student "write-in" requirements

Description: Include contact information and optional information on one-on-one counseling sessions with faculty.

User Priority: Optional/Would Like

Status: Accepted

Comment: The information on one-on-one counseling sessions might be accomplished simply by having each faculty's office hours posted in the portal.

ID: RS-17

Description: Include information on other program registration requirements, such as graduation paperwork.

User Priority: Optional/Would Like

Status: Accepted

Comment: Graduation paperwork: Graduation Card and Patent Agreement. Provide a pointer here to the "minimum class size" requirement, which states how big a class must be so that it won't be cancelled.

ID: RS-18

Description: Along with listing relevant elective coursework, perhaps there could be information of transferable courses from other local universities.

User Priority: Optional/Would Like

Status: Accepted

Comment: Create a student task to view the Transfer Course Equivalencies page: <u>http://www.fis.ncsu.edu/UGA/course.htm</u>

ID: RS-19

Description: Include links to an assortment of helpful information, such as style guides, STC information, discussion board, FAQs - that kind of thing.

User Priority: Optional/Would Like

Status: Deferred

ID: RS-20

Description: I would also like to see other students' viewpoints on elective courses outside the department—whether they were worthwhile for technical communicators and what areas they cover related to our degree.

User Priority: Optional/Would Like

Status: Accepted

Comment: Provide a way for the user to assess elective relevance.

ID: RS-21

Description: See course scheduling times and determine if they overlap with any other courses you're interested in—like an oracle calendar view where you could see when things overlap, and can view more than two courses at a time.

User Priority: Optional/Would Like

Status: Deferred

ID: RS-22

Description: Modified descriptions of courses (so that course descriptions are accurate).

User Priority: Optional/Would Like

This requirement was mentioned by two submitters.

Status: Deferred

Comment: [User stated: I know this can't happen because of Registration & Records, but I'd still like to voice my interest in this.]

There is an 80-word limit imposed by Registration & Records.

ID: RS-23

Description: A list of other people in the program who have taken available courses (required or electives) and possibly an e-mail contact, and/or a cumulative rating for each course from students, and/or comments from students about each course.

User Priority: Optional/Would Like This requirement was mentioned by two submitters.

Status: Deferred

Comment: Data cannot be extracted from Registration & Records due to privacy issues. Consider offering this capability as a topic in an online student Wiki or Discussion Forum.

ID: RS-24

Description: Be able to check my account balance to see if my financial aid has appeared and what day it will go through.

User Priority: Optional/Don't Care

Status: Accepted

Comment: [User comment: This is probably something you couldn't fix, because it's a financial aid thing. It's an Optional/Don't Care, because I know you can't do much about it.]

Provide a link to the system from which this information is obtained.

ID: RS-25

Description: To be able to see if books are available yet. Link straight from the course to related books.

User Priority: Optional/Don't Care

Status: Accepted

Comment: [User comments: Probably because I'm anal, but to me, books are related to courses. But no, I have to go find the bookstore and then go through a whole other process to find what books I need for my course. I'm sure it would take an act of God for these to things to hook up.]

Provide a student task that takes the user to: http://ncsu.collegestoreonline.com/ePOS?form=textbooks.html

ID: RS-26

Description: To be able to check to see if the professor has a Web site up for the course or if there is an older version of the Web site up for the course.

User Priority: Optional/Don't Care

Status: Accepted

Comment: [User comments: Is it against the law to post the old versions of the class Web site for new students, or something?]

Provide a student task that takes the user to: http://courses.ncsu.edu/

ID: RS-27

Description: To be able to visit the professor's personal Web site for more information about a course.

User Priority: Optional/Don't Care

Status: Accepted

Comment: Provide a student task to get more information on professors (i.e., their home pages, perhaps a link to "Pick-A-Prof")

ID: RS-28

Description: For those of us that go through the MS Program over the course of 4-6 years it would be helpful to have notations next to the classes like: usually offered every spring semester, offered every two years, etc. Sometimes you see a class offered that you might pass on and then wish you had taken it based on the limited availability.

User Priority: Optional/Would Like

Status: Accepted

Comment: Provide a student task to allow "Personal Course Notes" to be written—could be to a flat file or to a database.

ID: RS-29

Description: To view not only the next semester's course offerings, but also the semester after that. It might help a student plan a bit better.

User Priority: Optional/Would Like

Status: Rejected

Comment: The university schedule is not made that far in advance.

ID: RS-30

Description: I want to know at least 1 to 2 weeks in advance if a class I registered for may be in jeopardy of being dropped. An automated e-mail notification would suffice allowing me time to find a backup class.

User Priority: Optional/Would Like

Status: Rejected

Comment: Assuming classes are only dropped due to low enrollment, knowing the university's requirement for minimum enrollment should be enough to know if a class is in danger of being dropped. Such notification may exacerbate the problem by having people drop the course before enough people can register for it to meet the enrollment minimum. (Consider noting the minimum enrollment requirement in the implementation of RS-17.)

ID: RS-31

Description: I'd like to see a listing of classes from other universities that have transferred into the NCSU MS Technical Communication program, and to see how they are categorized across required, application, and method courses.

User Priority: Optional/Would Like

Status: Deferred

Comment: This could be an enhancement to RS-18.

ID: RS-32

Description: For each elective cluster, make information available that connects the cluster to either skills or jobs in which taking such courses would be of benefit.

User Priority: Optional/Would Like

Status: Deferred

Comment: Deferring due to content creation requirement.

Program Administrator requirements assessed by current Program Administrator

ID: RPA-1

Description: Provides a way to view a snapshot of a student's current Plan of Work.

User Priority: Necessary

Status: Accepted

ID: RPA-2

Description: Provides a way to view student schedules that are waiting for approval.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-3

Description: Provides a way to approve student schedules that are waiting for approval.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-4

Description: Provides a way to send a student with an approved schedule his or her PIN.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-5

Description: Provides a way to schedule an advising session should I, or the student, want or require one.

User Priority: Necessary

Status: Accepted

ID: RPA-6

Description: Provides a way to facilitate an online chat session with a student to handle cases where the automated process isn't enough, but a face-to-face meeting is not necessary.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-7

Description: Provides a way to view student requests to assess a course as an eligible elective.

User Priority: Necessary

Status: Accepted

ID: RPA-8

Description: Provides a way to approve student requests to assess a course as an eligible elective.

User Priority: Necessary

Status: Accepted

ID: RPA-9

Description: Provides a way to designate a course as an application course or as a theory or method course.

User Priority: Necessary

Status: Accepted

ID: RPA-10

Description: Provides a way to associate an elective with an elective cluster.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-11

Description: Provides a way to notify students when a course assessment has been completed.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-12

Description: Provides a way to update an elective whose designation as an eligible elective, or whose type of elective, changes.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-13

Description: Provides a way to view student demand for *required* courses for the semester *subsequent* to the one for which the student is currently enrolling.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-14

Description: Provides a way to view student demand for *elective* courses for the semester *subsequent* to the one for which the student is currently enrolling.

User Priority: Optional/Would Like

Status: Deferred

ID: RPA-15

Description: Provides a link to the <u>MS in Technical Communication</u> Web page.

User Priority: Optional/Would Like

Status: Accepted

ID: RPA-16

Description: Provides a link to the Academic Calendars & Exam Schedules Web page.

User Priority: Optional/Would Like

Status: Accepted

Program Administrator "write-in" requirements

ID: RPA-17

Description: Keeping track of applications for the MS program and which ones are complete takes a good bit of time.

User Priority: Unnecessary

Status: Rejected

Comment: User comment: This is already partly automated by the grad school and probably not anything the portal could help with.

ID: RPA-18

Description: It takes a couple of hours each semester to go through all the course offerings in other departments so as to prepare the list of electives to send to everyone.

User Priority: Unnecessary

Status: Rejected

Comment: User comment: I don't see any way for the portal to help here either.

ID: RPA-19
Description: Provide a student task to solicit feedback from previous semester's courses, particularly electives.

User Priority: Optional/Would Like

Status: Accepted

Faculty requirements assessed by 5 faculty

ID : RF-1					
Description: View a projection of the number of students planning to sign up for a required course, not for the semester currently being enrolled for, but for the subsequent one.					
User Priority:					
Necessary:	1	20%			
Optional/Would Like:	3	60%			
Optional/Don't Care:	1	20%			
Unnecessary:	0	0%			

Status: Accepted

ID: RF-2					
Description: Help me create a course description.					
User Priority:					
Necessary:	1	20%			
Optional/Would Like:	1	20%			
Optional/Don't Care:	3	60%			
Unnecessary:	0	0%			

ID: RF-3					
Description: Help me advertise a course.					
User Priority:					
Necessary:	1	20%			
Optional/Would Like:	4	80%			
Optional/Don't Care:	0	0%			
Unnecessary:	0	0%			

ID: RF-4					
Description: Facilitate the creation of a Wolfware page for my course.					
User Priority:					
Necessary:	1	20%			
Optional/Would Like:	2	40%			
Optional/Don't Care:	1	20%			
Unnecessary:	1	20%			
Unnecessary: Status: Accepted	1	20%			

ID: RF-5					
Description: Facilitate or remind to submit book requests to the NCSU Bookstore.					
User Priority:					
Necessary:	1	20%			
Optional/Would Like:	0	0%			
Optional/Don't Care:	3	60%			
Unnecessary:	1	20%			
Status: Rejected					

ID: RF-6

Description: Notify enrolled students of books intended to be used for a course.

User Priority:			
Necessary:	1	20%	
Optional/Would Like:	3	60%	
Optional/Don't Care:	0	0%	
Unnecessary:	1	20%	
Status: Deferred			

ID: RF-7							
Description: Facilitate putting or reminder to put books on reserve.							
User Priority:							
Necessary:	2	40%					
Optional/Would Like:	2	40%					
Optional/Don't Care:	0	0%					
Unnecessary:	1	20%					

ID: RF-8								
Description: Facilitate or remind creating syllabi.								
User Priority:								
Necessary:	1	20%						
Optional/Would Like:	2	40%						
Optional/Don't Care:	1	20%						
Unnecessary:	1	20%						
Status: Accepted								

Faculty "write-in" requirements

ID: RF-9

Description: Management of the proposals, consultations, and oral defenses for ENG 675. Scheduling of the defenses, for example, is a kind of jigsaw puzzle that would be helpful to have assistance with, and then a permanent record of.

User Priority: Would Like

Status: Deferred

Comment: [User comment: In fact, now that I'm thinking about it, it would be great to have a portfolio or gallery of student projects each semester that could then be transferred to a permanent program portfolio on the program Web site.]

ID: RF-10

Description: To be reminded of add/drop deadlines.

User Priority: Would Like

Status: Rejected

Comment: User comment: In fact, now that I'm thinking about it, it would be great to have a portfolio or gallery of student projects each semester that could then be transferred to a permanent program portfolio on the program Web site.

ID: RF-11

Description: To have the ability to send student progress reports to the program administrator.

User Priority: Would Like

Status: Deferred

ID: RF-12

Description: To archive syllabi from previous semesters for student access.

User Priority: Would Like

Status: Deferred

ID: RF-13

Description: I would like to have a section where the program administrator can store electronic copies of new MS applications, and an online form that I can use to offer comments on each admissions file.

User Priority: Would Like

Status: Deferred

Comment: User comment: This is a feature to support admissions work.

ID: RF-14

Description: I would also like a section for alumni to enter a picture, contact information, 675 project (including the actual project where possible), graduation date, and job after the MS program.

User Priority: Would Like

Status: Deferred

ID: RF-15

Description: It would be interesting to see what courses students are registering for both within the English Department and in other departments. This might help us spot trends that would allow us to make changes to the curriculum.

User Priority: Would Like

Status: Deferred

Comment: User comment: This is a task that I've never done, but would find interesting.