

# Detailed Design

## Siena College Catalog Project

*February 28, 2005*

**Requested by:**

Ms. Kate Zimmerman  
Academic Program Administrator  
Office of Academic Affairs  
Siena College

Mr. Brian Smith  
College Webmaster  
Office of Enrollment and Planning Technology  
Siena College

Ms. Lisa Veino  
Office of Academic Affairs

### **Spartacus Computing Solutions**

**Prepared by:**

Michael Cervone, *Team Leader/Web Designer*  
Thomas Hackett, *Librarian*  
Sean Hannon, *Software Consultant*  
Sara Pagliaro, *Sub-Group Leader*  
John Sawicki, *Systems Administrator*

*E-mail:* [spartacus\\_computing@hotmail.com](mailto:spartacus_computing@hotmail.com)

**Presentation information:** Tuesday, March 1, 2005  
Roger Bacon 328  
6:00 PM – 9:00 PM

**Siena College Catalog Database  
Detailed Design**

Table of Contents

**1. External Design Specifications**

<i>Section 1: User Displays and Report Formats.....</i>	3
<i>Section 2: User Command Summary.....</i>	29
<i>Section 3: Detailed Data Flow Diagrams.....</i>	32
<i>Section 4: Logical Data Dictionary.....</i>	39
<i>Section 5: Logical Data Stores.....</i>	60
<i>Section 6: Logical Format of Data Files and Databases.....</i>	89

**2. Architectural Design Specification**

<i>Section 1: ERD Diagrams.....</i>	90
<i>Section 2: Structure Diagrams.....</i>	92
<i>Section 3: Parameter Specification.....</i>	99
<i>Section 4: Functional Descriptions.....</i>	100

**3. Testing Requirements:**

<i>Section 1: Test Plan.....</i>	101
----------------------------------	-----

**4. Detailed Design Specification**

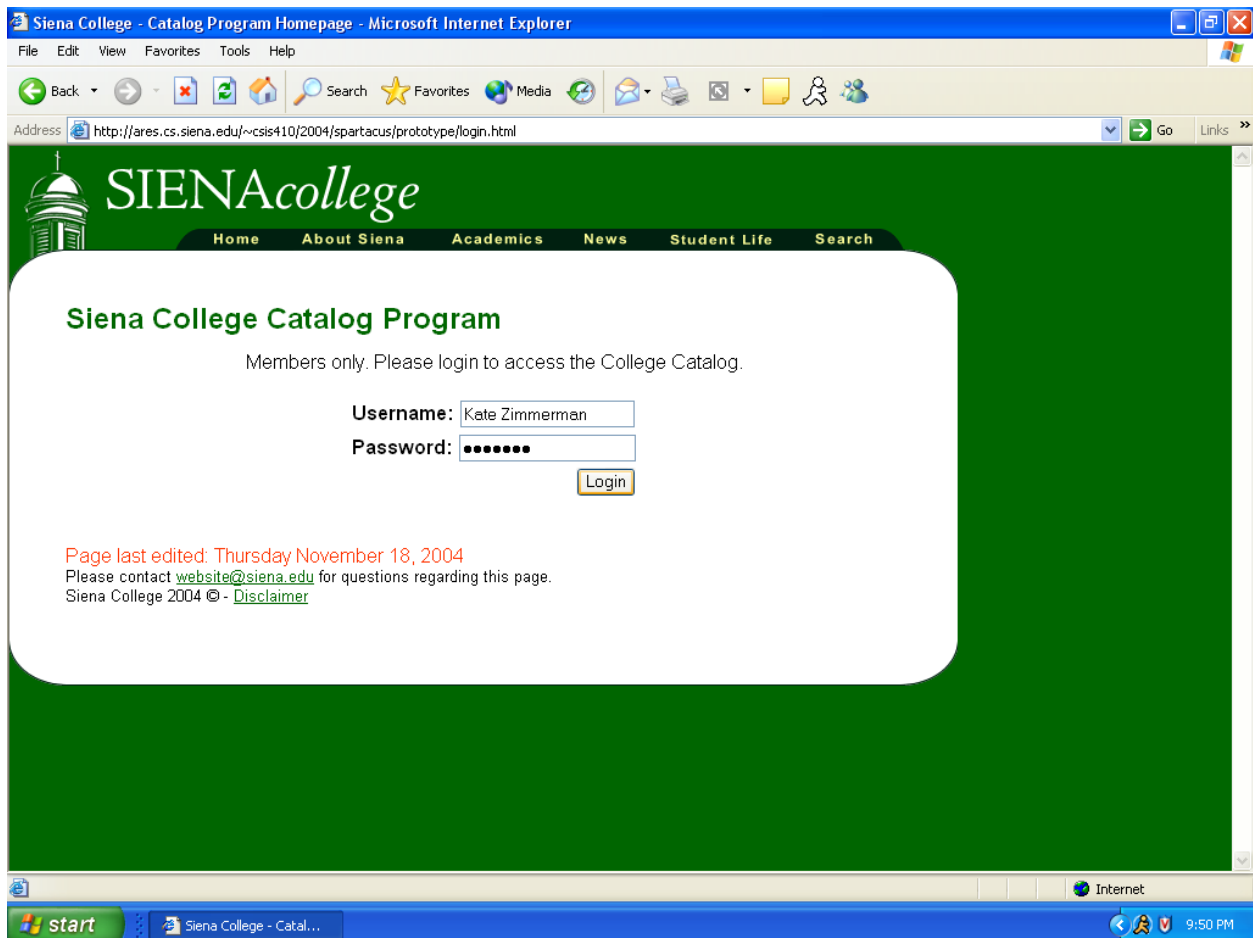
<i>Section 1: Physical Data Structures and Data File Specification.....</i>	118
<i>Section 2: Packaging Specification.....</i>	127

**5. Appendices:**

<i>Appendix A: Gantt Chart.....</i>	128
<i>Appendix B: Glossary of Terms.....</i>	129

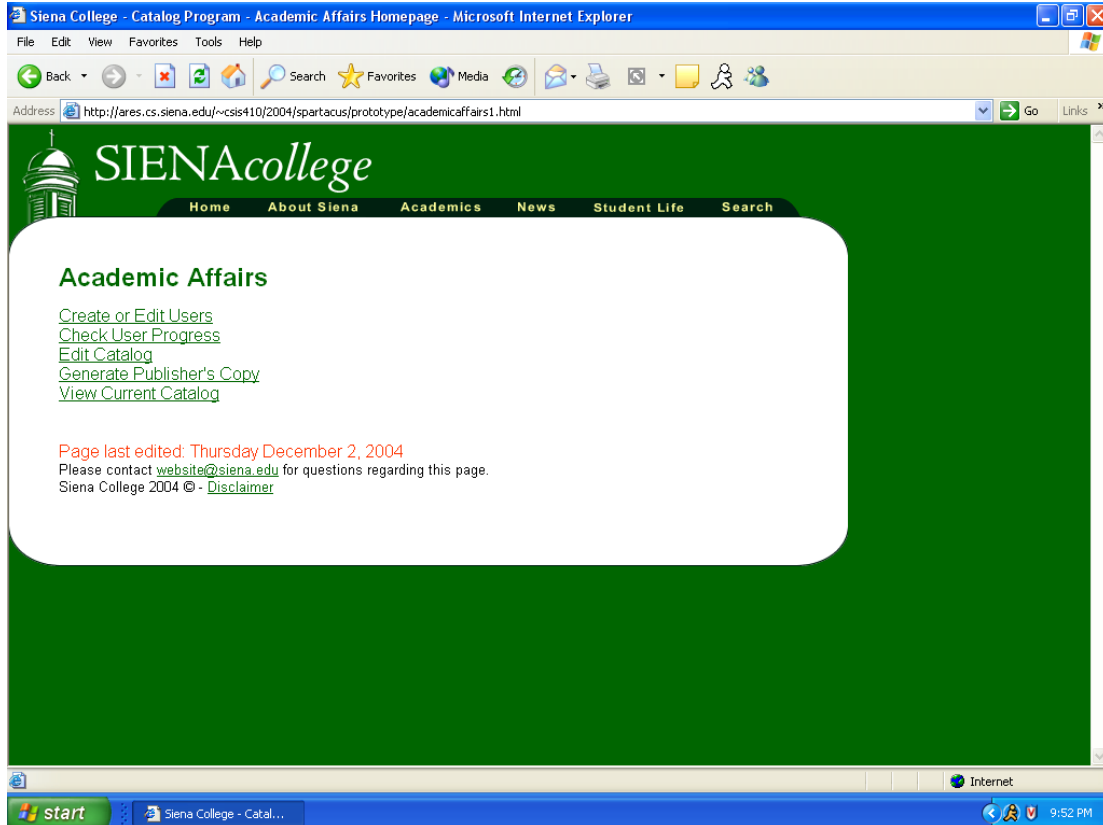
## 1.1: User Displays and Report Formats

### Screen for Any User

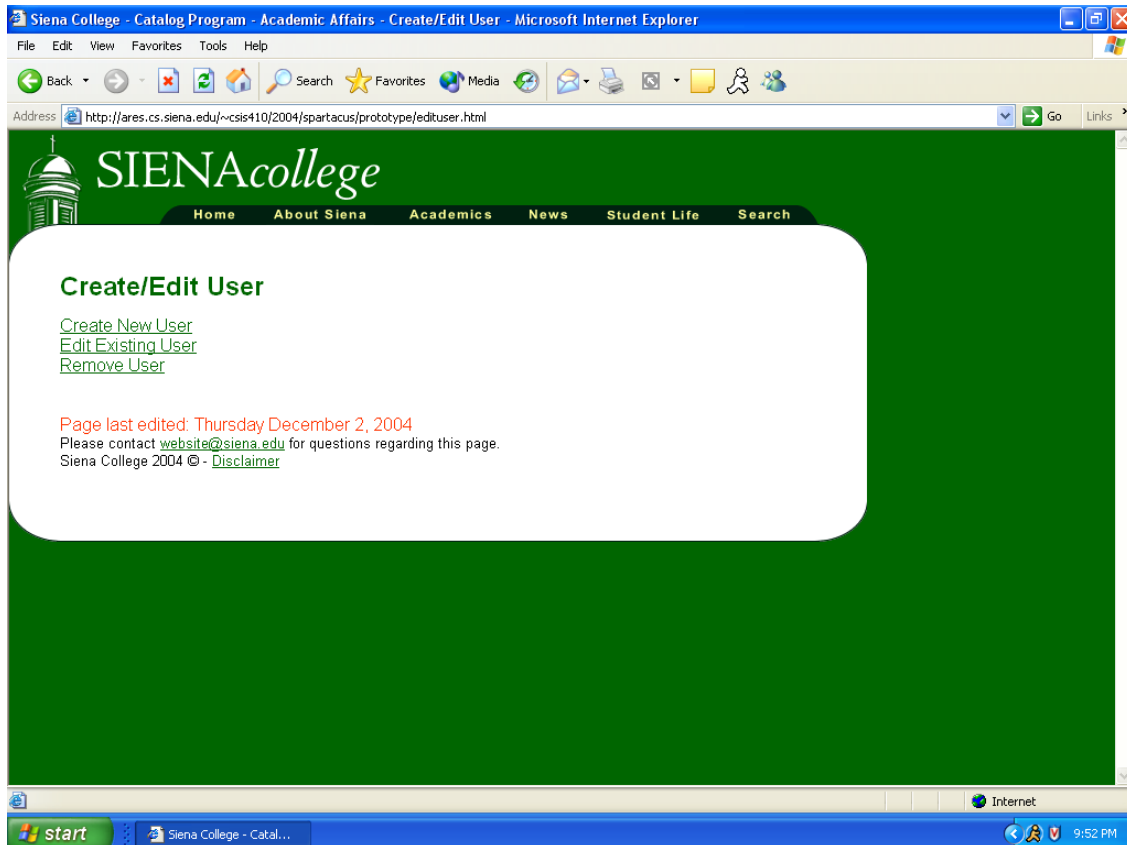


The login screen is the first screen that users will encounter. The login screen contains two fields: the username and the password. After the user enters their username and password into their respective fields, the system verifies the username and password to make sure they are valid before taking the user to their next respective screen.

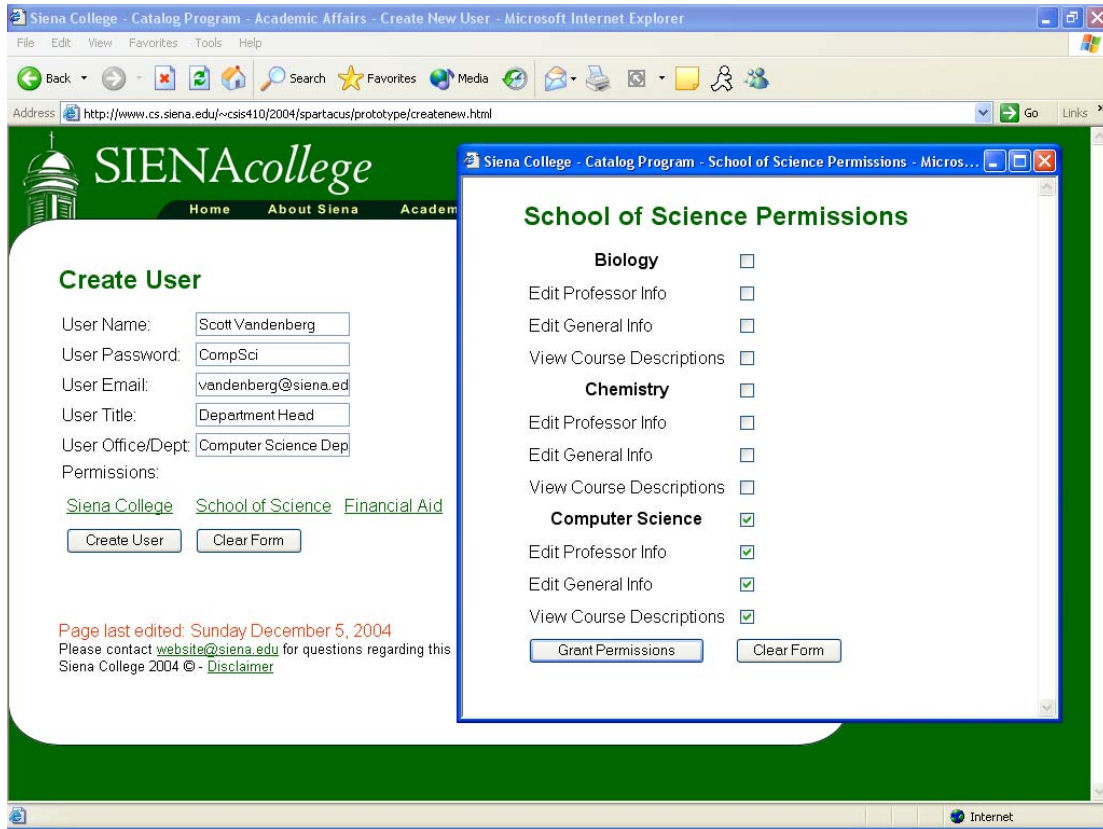
## Academic Affairs Screens



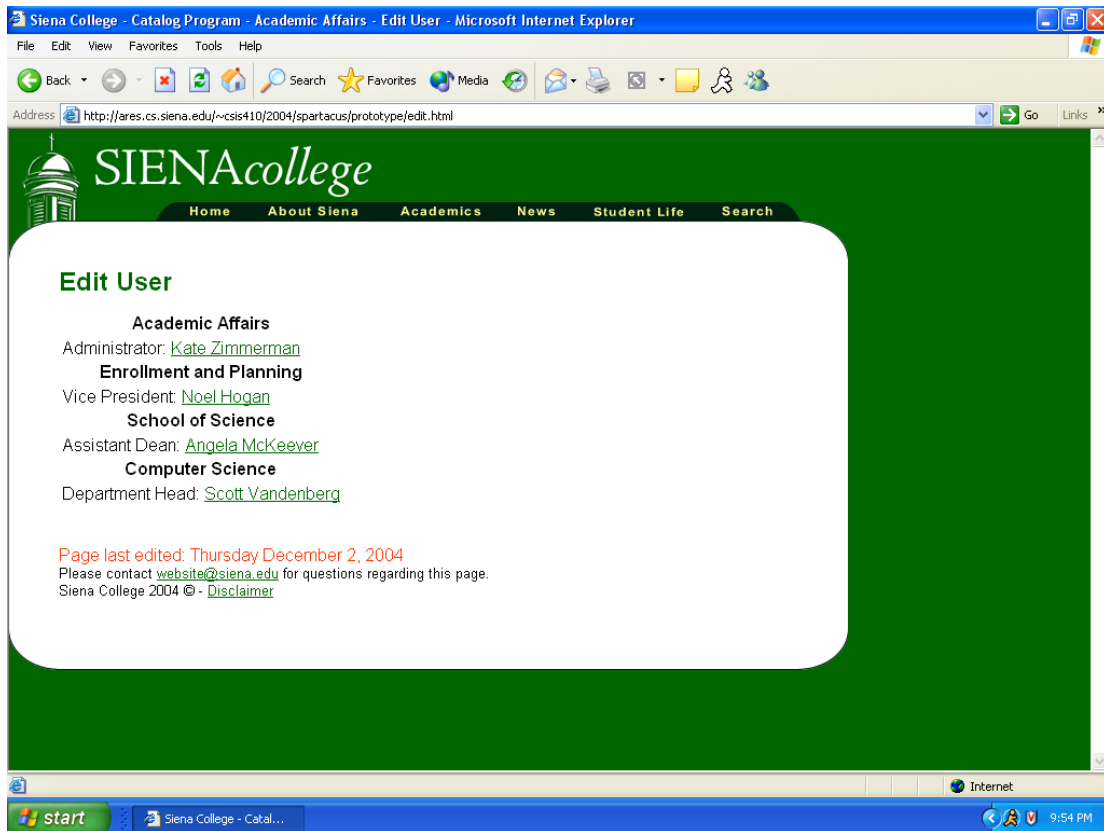
This page is the root page for the Academic Affairs administrator. The page contains links to the pages that allow the user to do various tasks; these links are *Create or Edit Users*, *Check User Progress*, *Edit Catalog*, *Generate Publisher's Copy*, and *View Current Catalog*. The *Generate Publisher's Copy* link when clicked compiles all of the catalog data into a document that can be sent electronically to the publisher. The *View Current Catalog* link when clicked opens up a new window with the current version of the catalog displayed. All other links are described on the following pages.



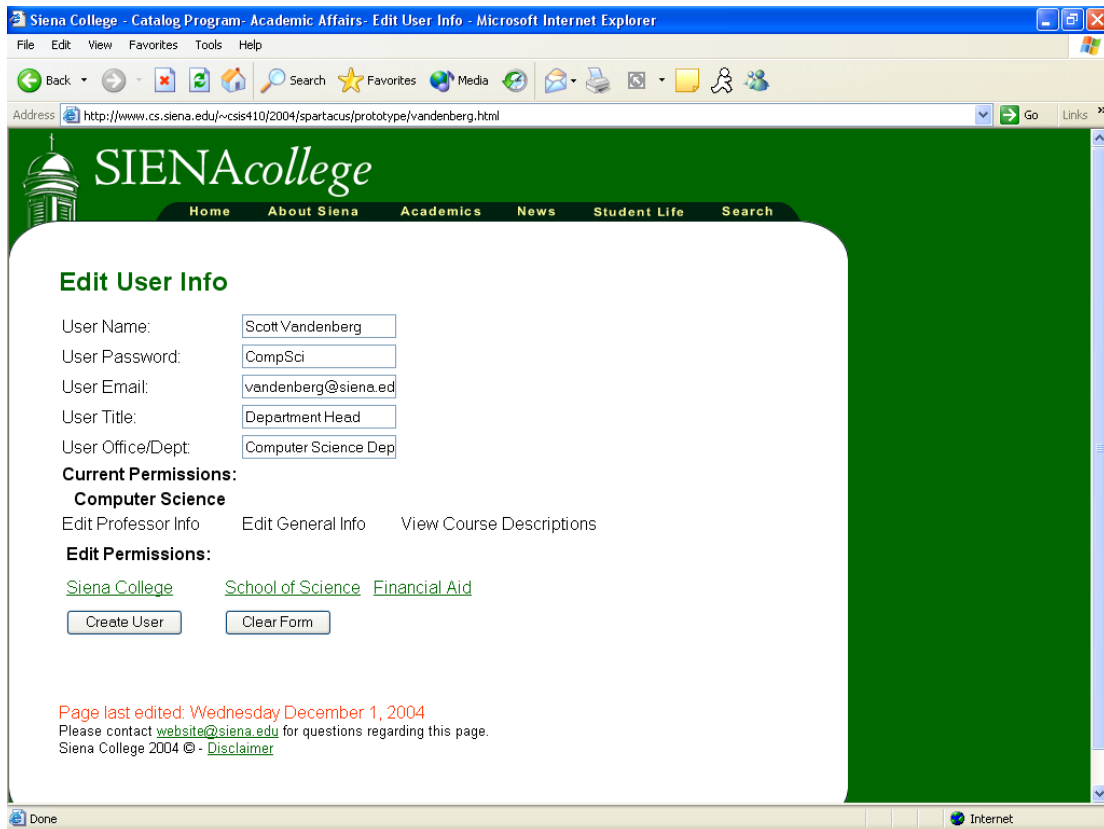
When the user clicks on the *Create or Edit Users* link (on the main Academic Affairs web page), they are taken to this page, which displays links to other pages that allow the Academic Affairs administrator to perform various tasks on users.



These tasks include creating a new user. While creating the new user, the administrator must set a username, default password, update the new user's e-mail, update his/her title and department, and set the permissions for the amount of information the user can access within the system.

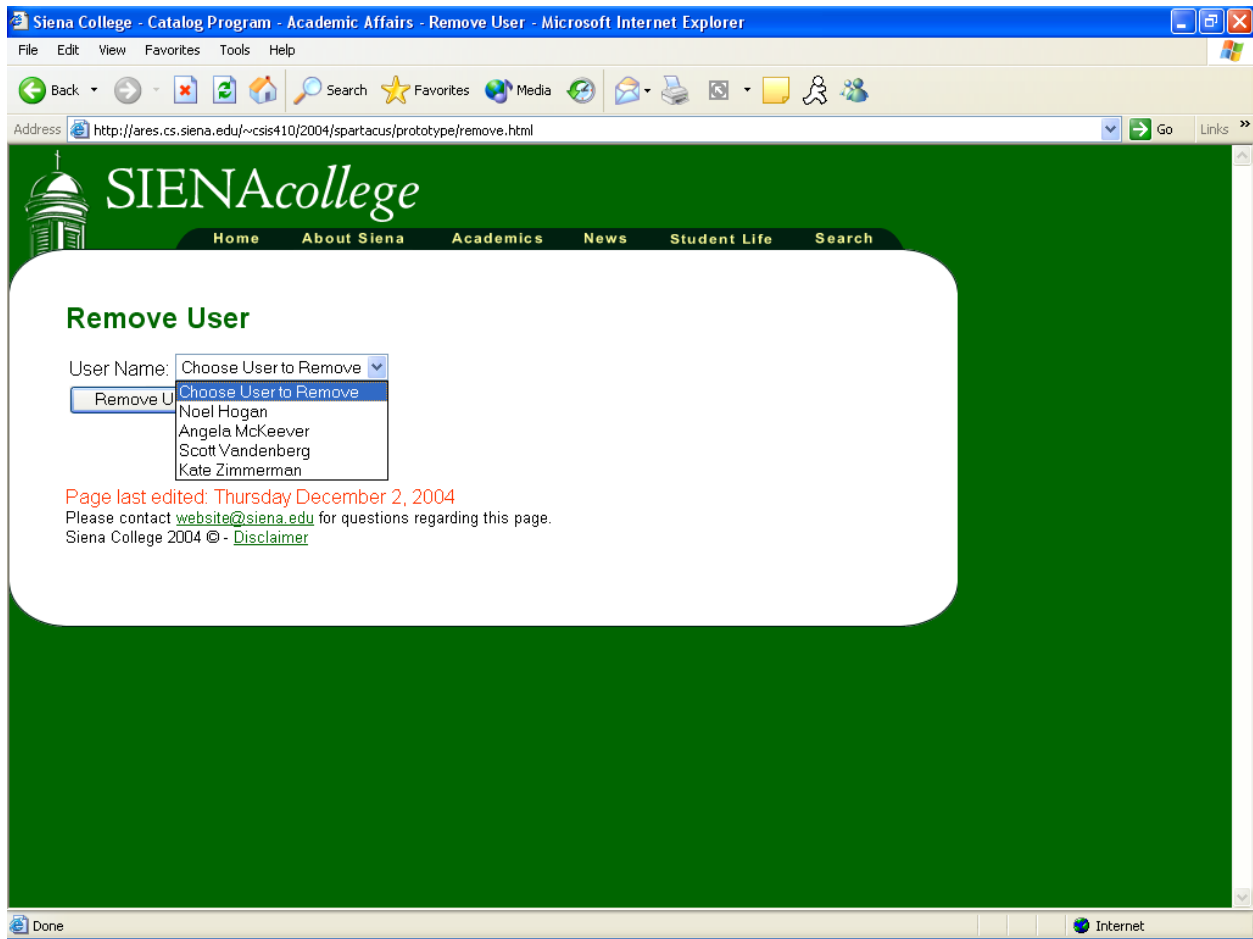


The Academic Affairs administrator also has the ability to edit the information or privileges of any user that is currently a user within the system.

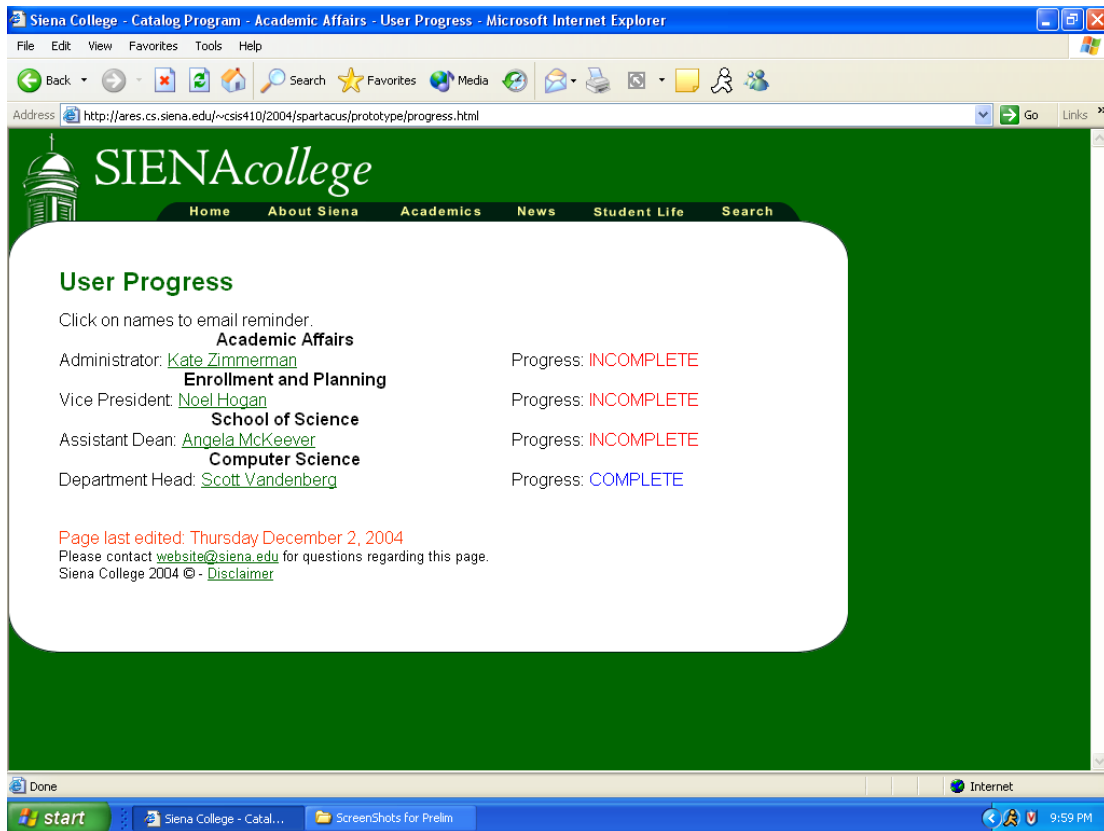


The *Edit User Info* page looks similar to the *Create New User* page since the same information can be edited.

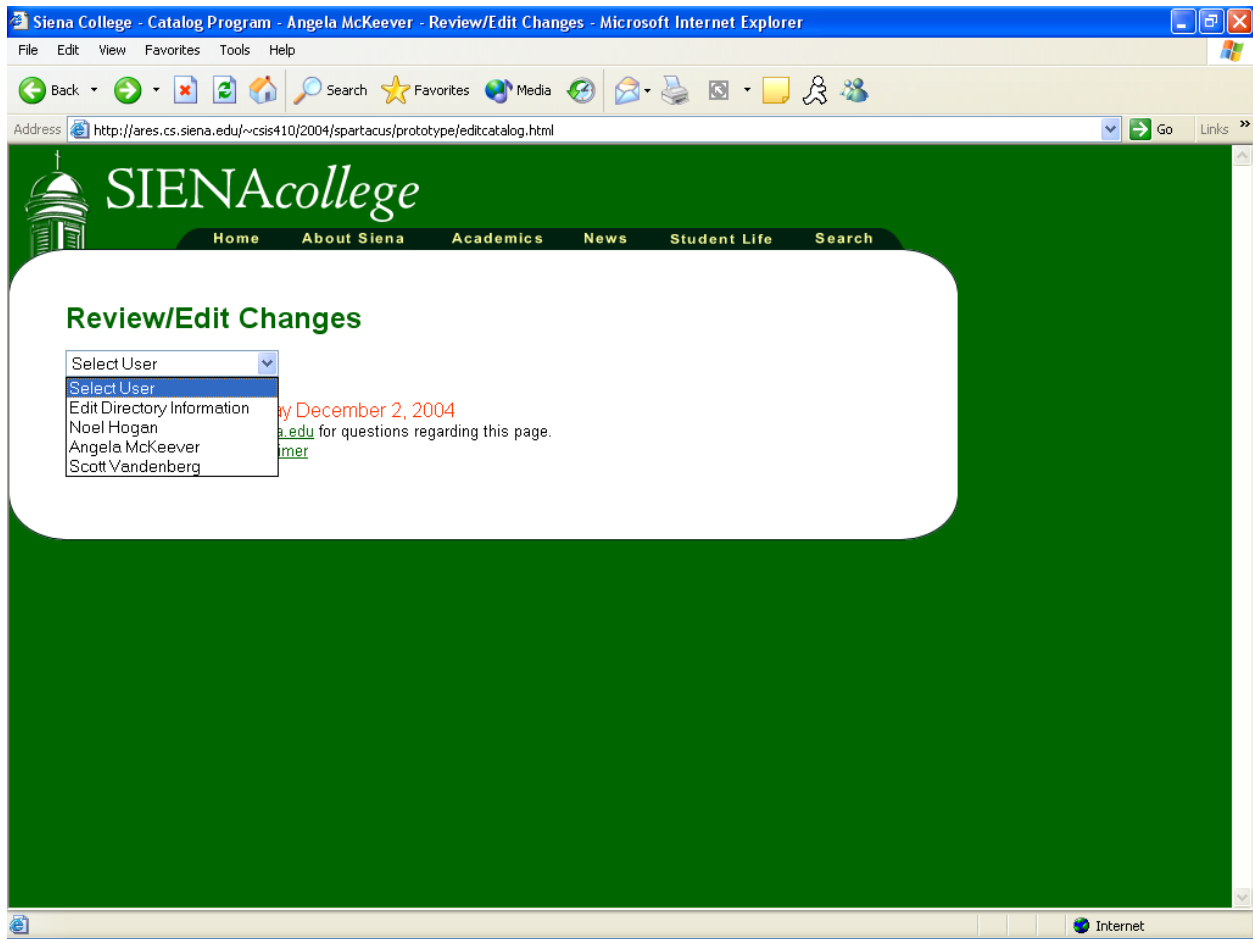




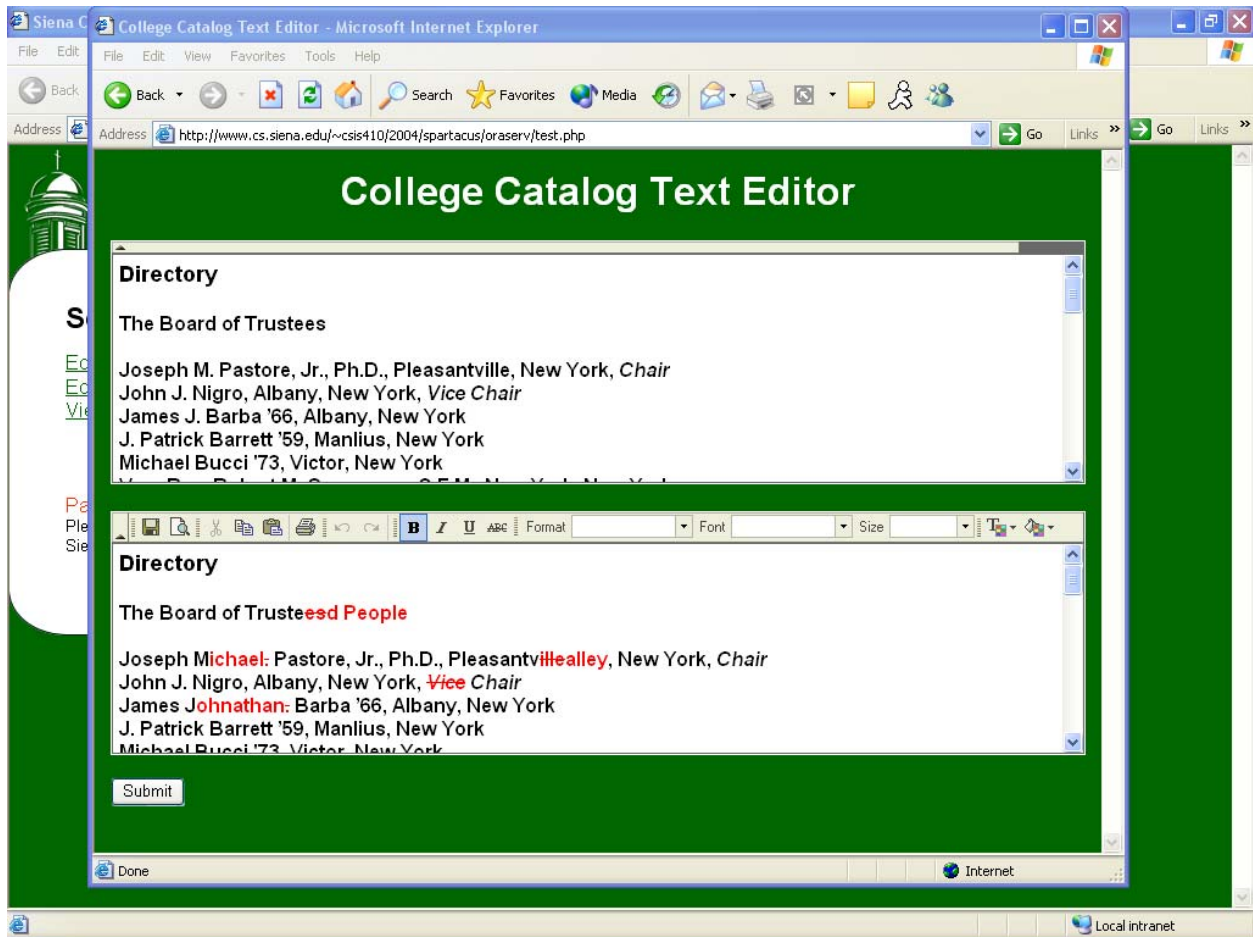
The Academic Affairs system administrator also has the ability to remove any user from the system, allowing the administrator to keep an up-to-date list of all college staff that should have access to the College Catalog database.



When the user clicks the *Check User Progress* link (on the main Academic Affairs page), they will be taken to this page, which displays information relating to the progress of the other users of the system.

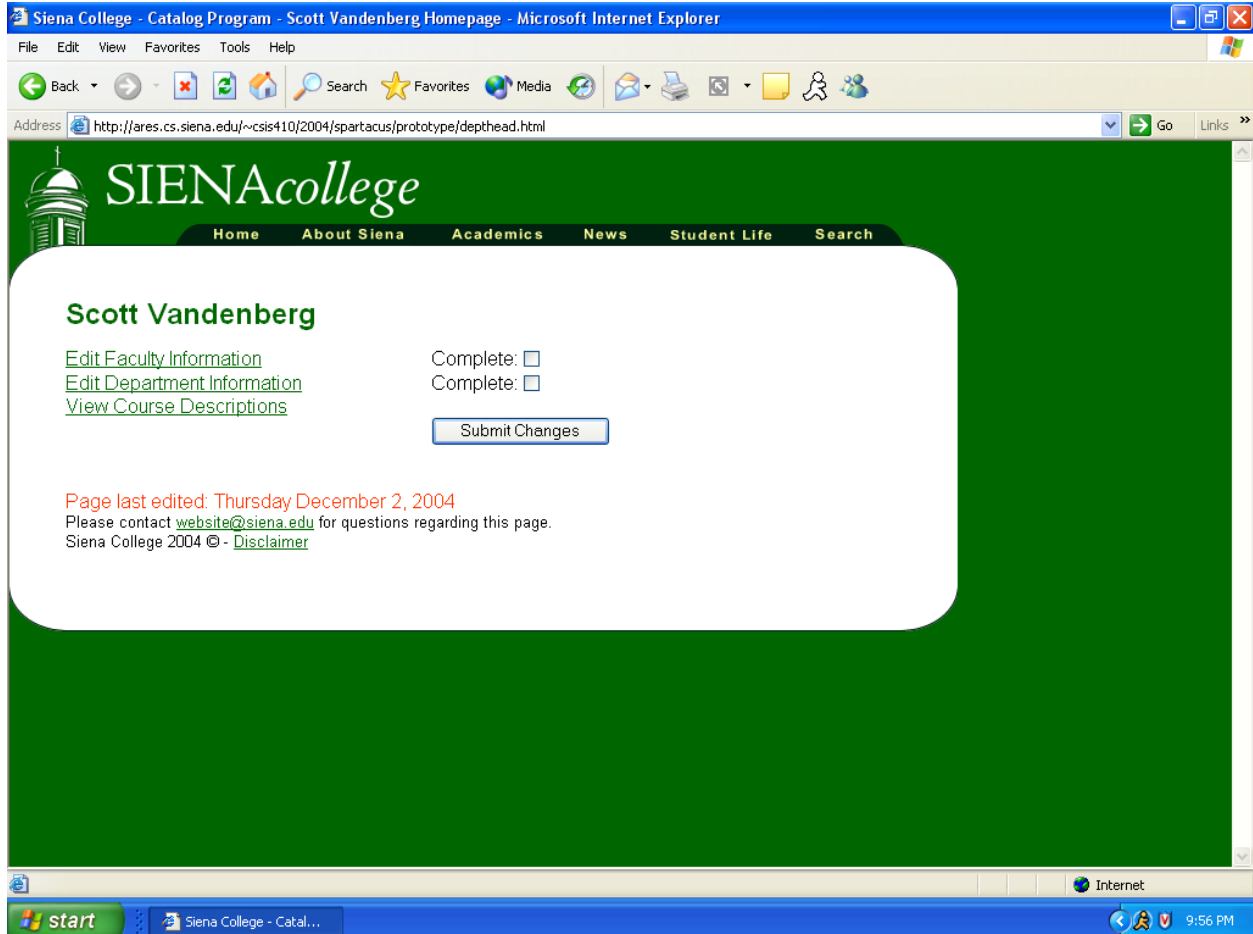


Since the Academic Affairs system administrator has control over the editing done throughout the entire catalog, the *Edit Catalog* link on the main Academic Affairs administrator web page allows him/her to access any part of the catalog for review or editing.

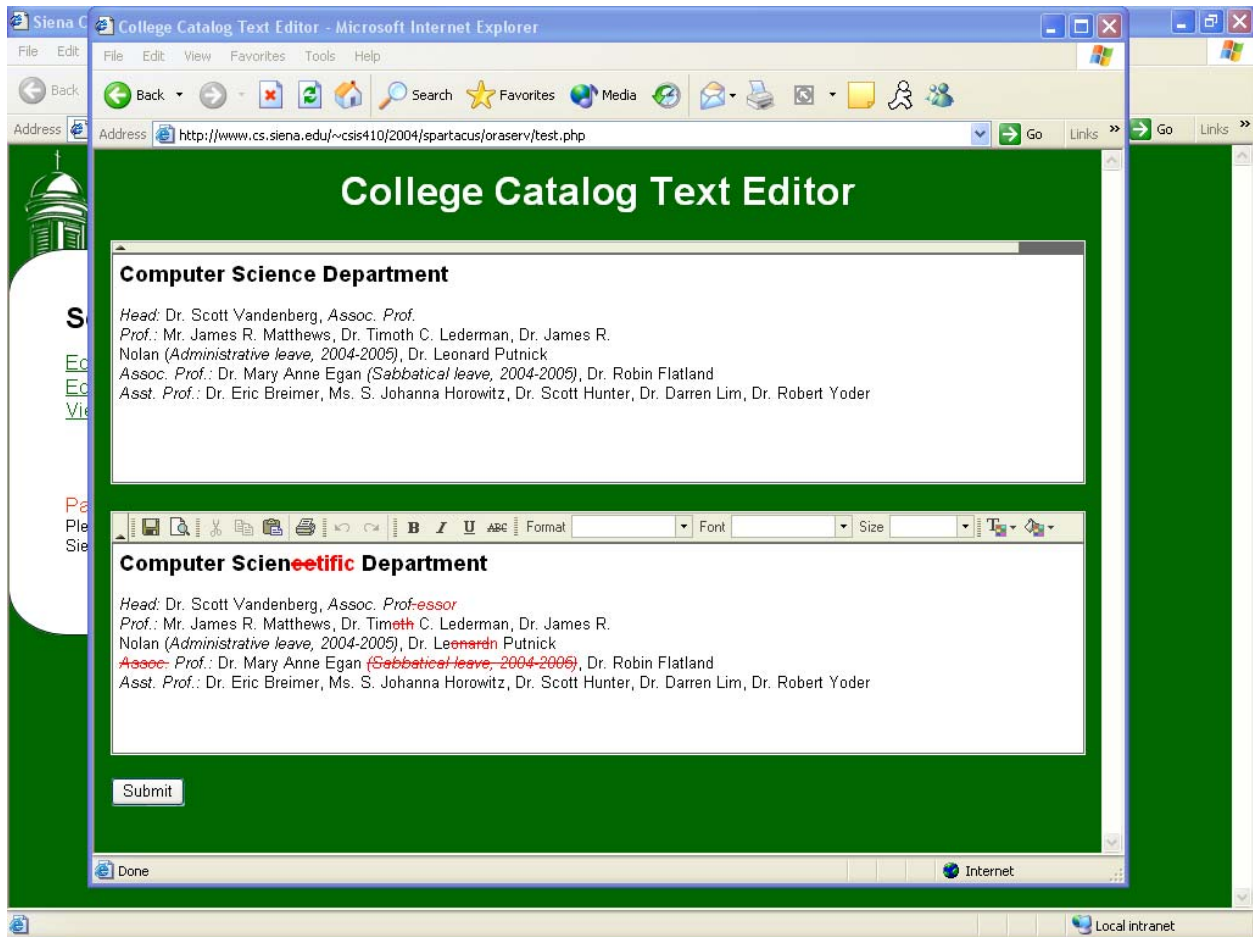


This is an example of a page that the Academic Affairs system administrator would have to review. The top frame of the page is what the catalog looks like without the changes, while the bottom frame of the page contains all revisions made by the system administrator.

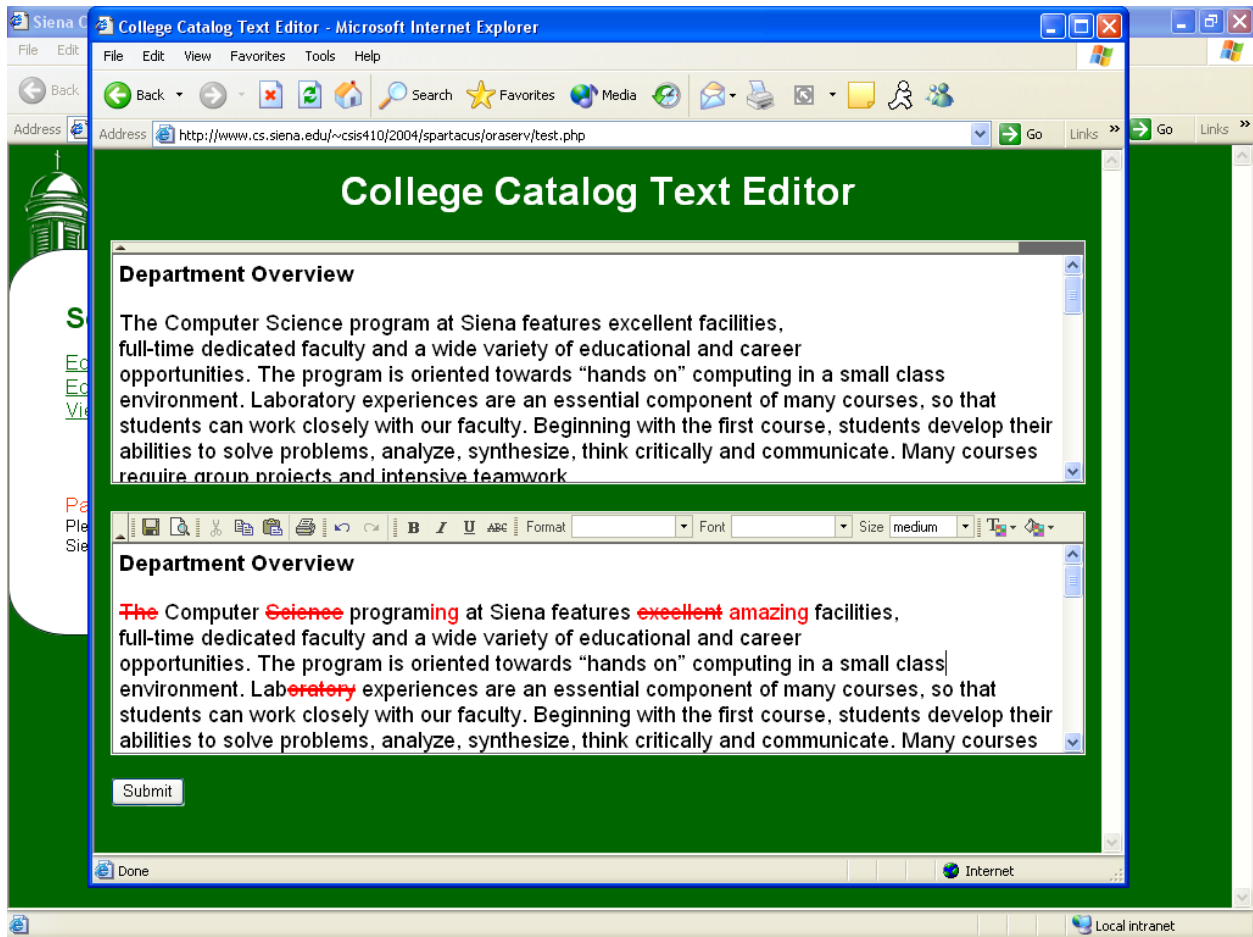
## Department Head Screens



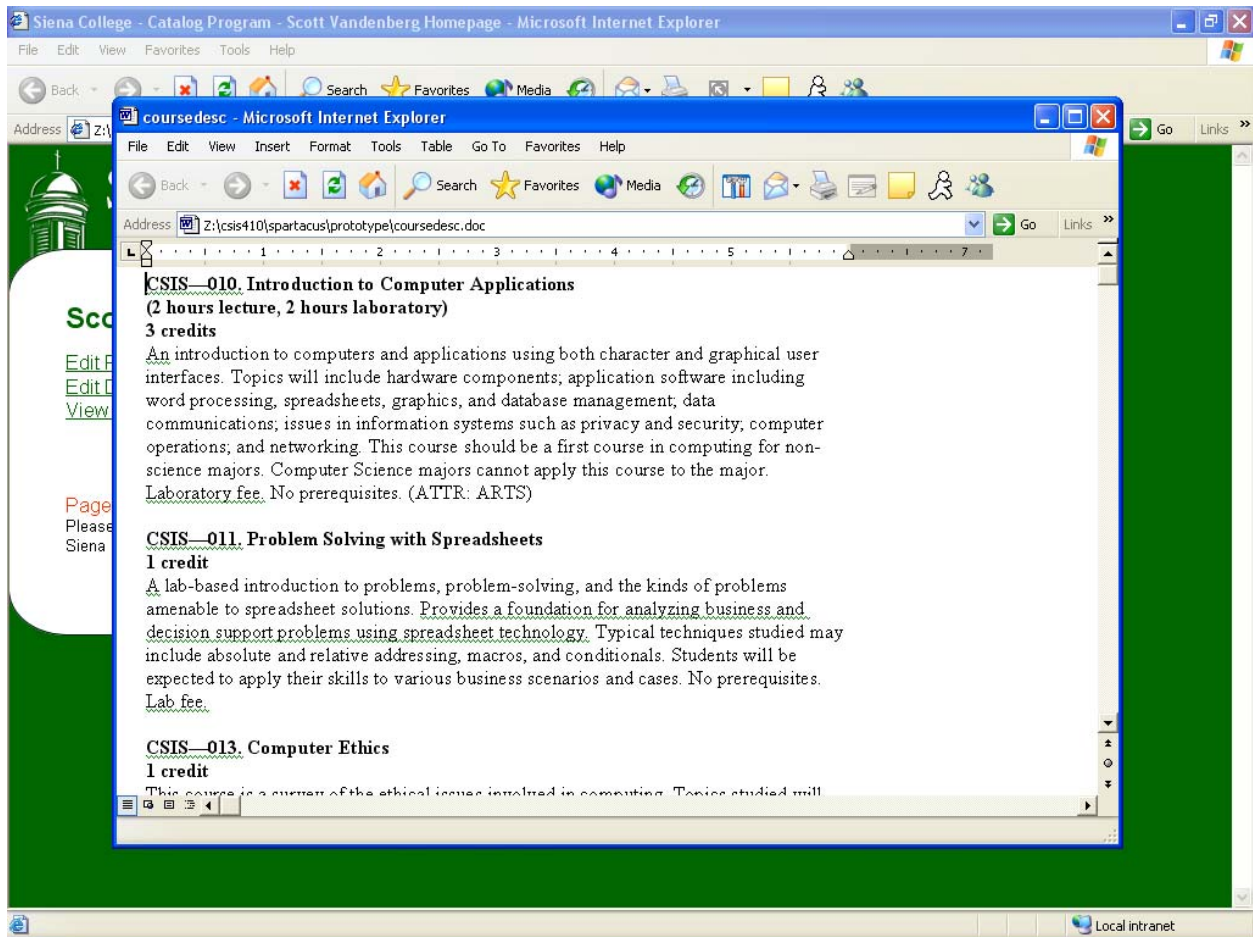
The Department Head home page contains links for all of the sections of the catalog that the given Department Head has access to change, along with corresponding check boxes (which signify if that particular section has been completed), and a link to view the course descriptions in their given department. Course descriptions can be read but not edited, since the information can only be changed in the Banner database system; our database system does not have the ability to change anything in Banner. When the Department Head is finished editing the section, s/he clicks the check box and click the *Submit Changes* button to submit his/her changes and update his/her catalog progress.



Using the example of Computer Science Department Head Scott Vandenberg, this would be an example of a section of the catalog that he would be able to edit. On this page, Dr. Vandenberg has the ability to edit faculty information. As with the Academic Affairs editing page, the top frame of the page is for review of what the catalog currently says without changes, while the bottom frame of the page contains all edited catalog information.



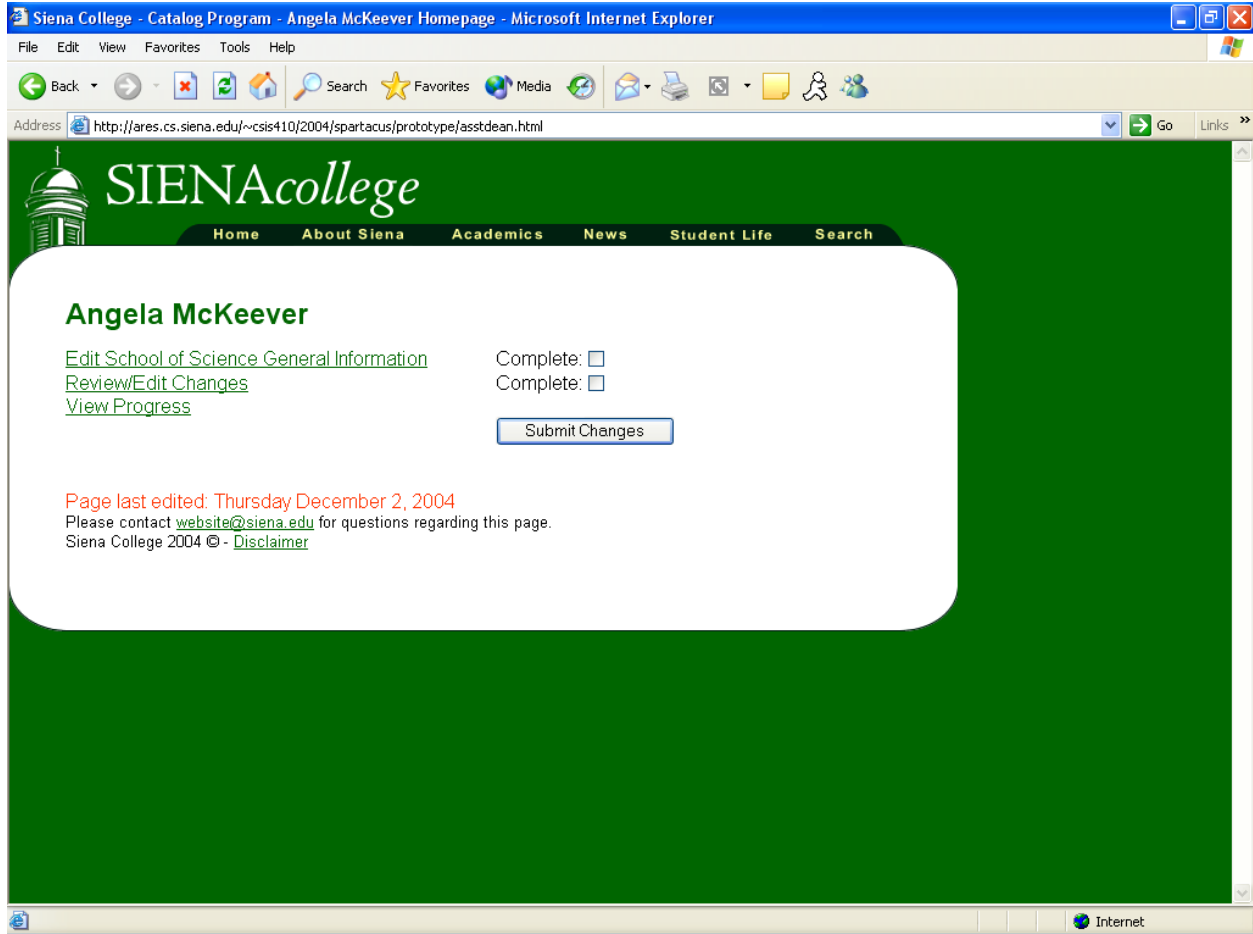
Another section of the catalog that Dr. Vandenberg would have the ability to edit is the Computer Science Department's information.



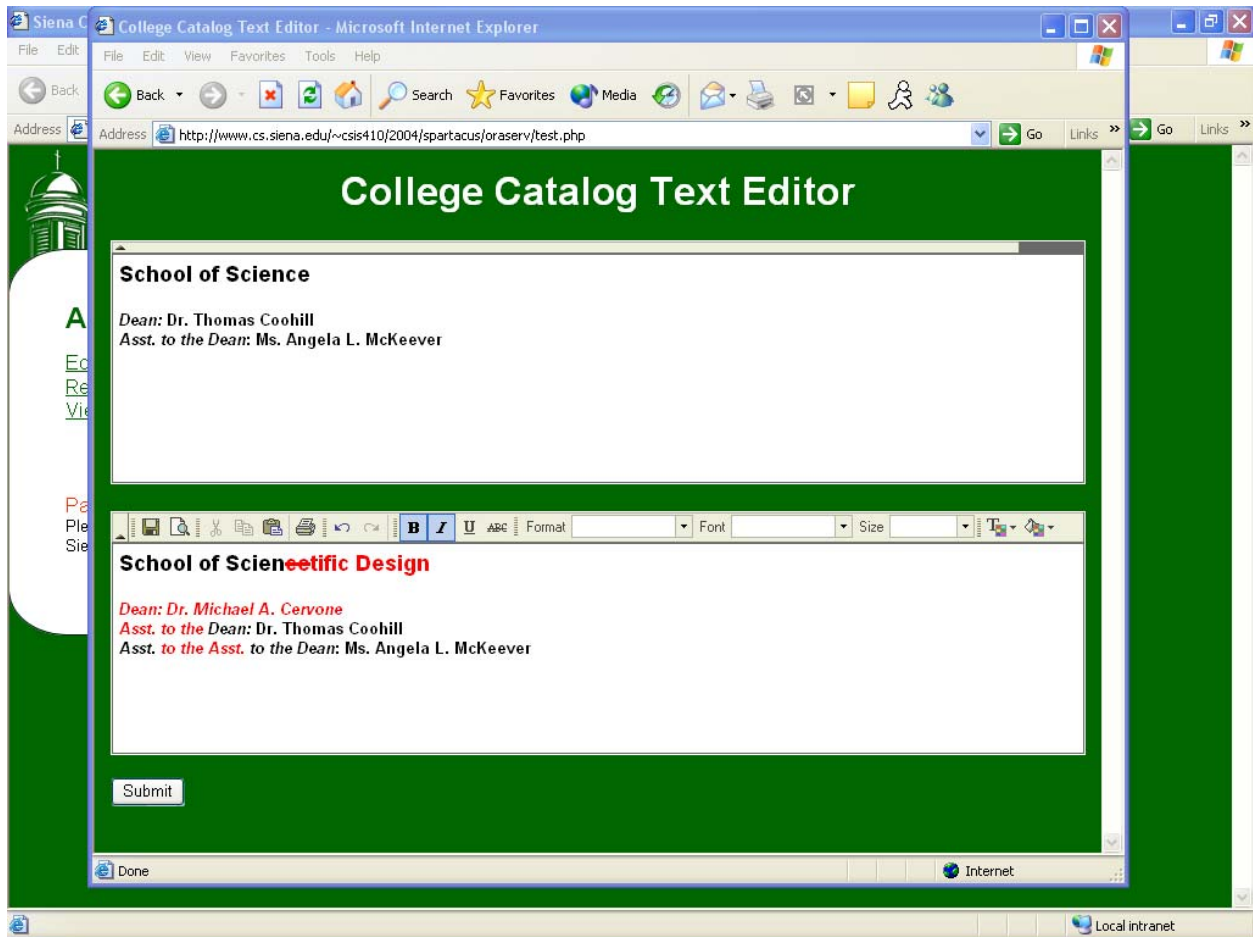
As stated previously, the Department Head has the ability to view course information, but does not have the ability to change any information contained within this section. This is an example of the Computer Science Department's course information.



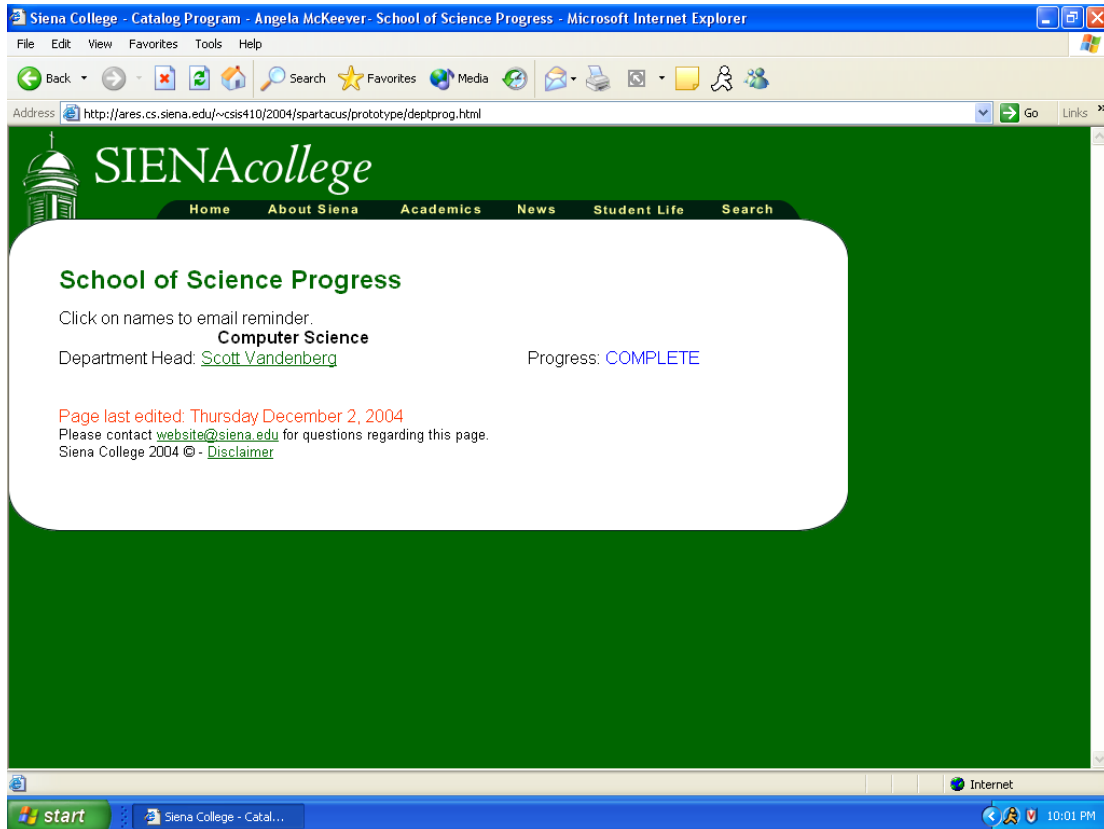
## Assistant Dean Screens



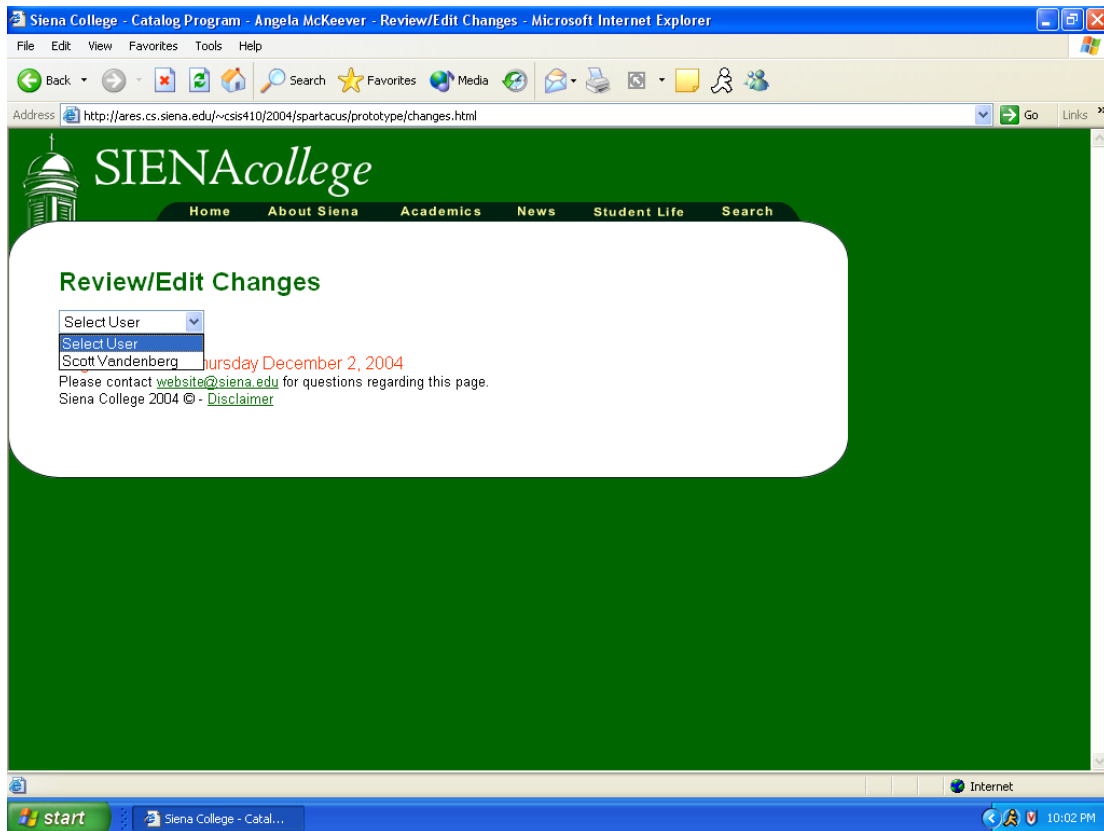
This is an example of the Assistant Dean's home page. It contains links to all of the different sections of the catalog that the Assistant Dean needs to change or monitor. The links include the following: *Edit **Given School** General Information*, *View Progress*, and *Review/Edit Changes*. When editing is completed the appropriate check box should be checked to indicate that the user is finished editing that section.



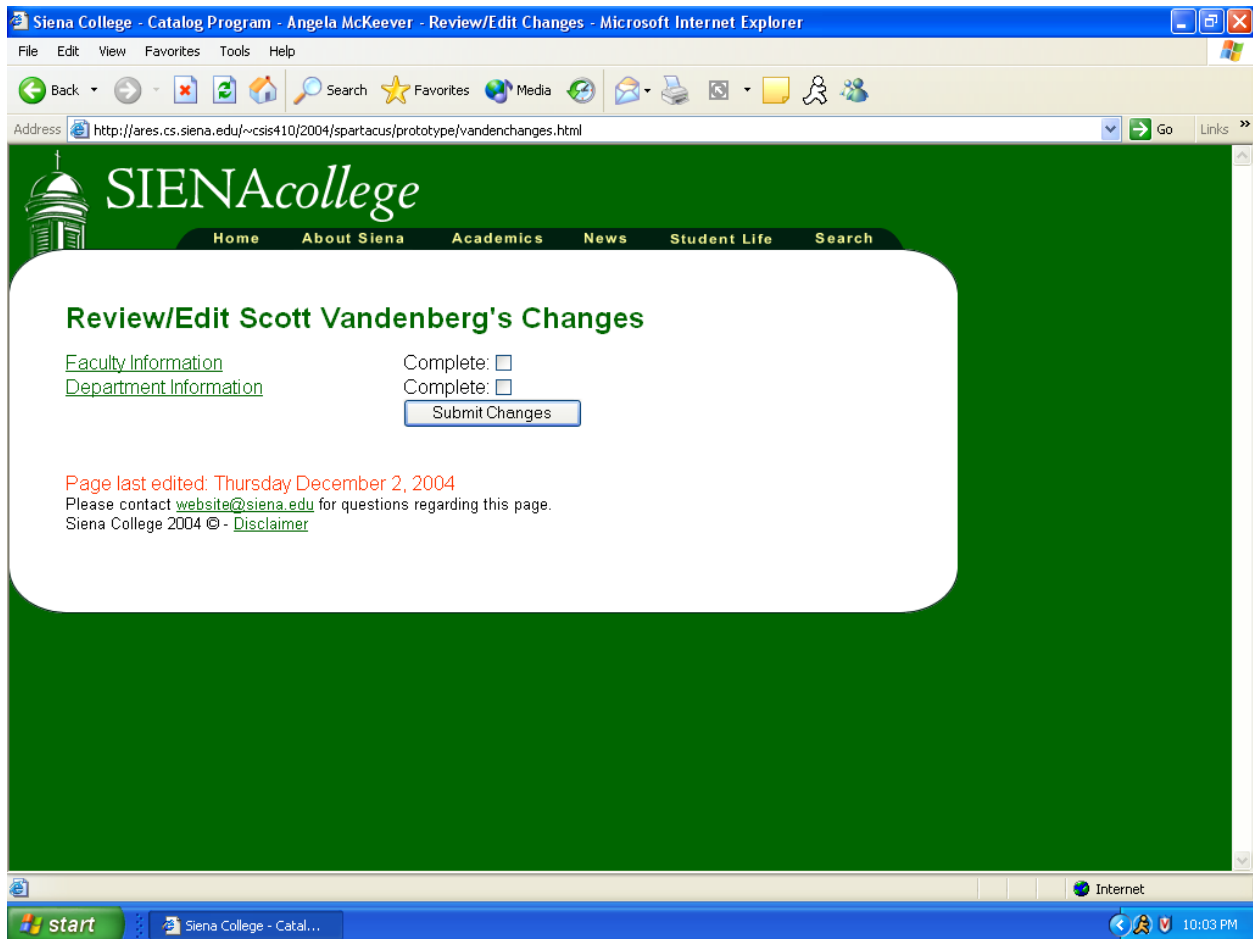
When clicked, the *Edit **Given School** General Information* link opens the general information section of the given school for editing.



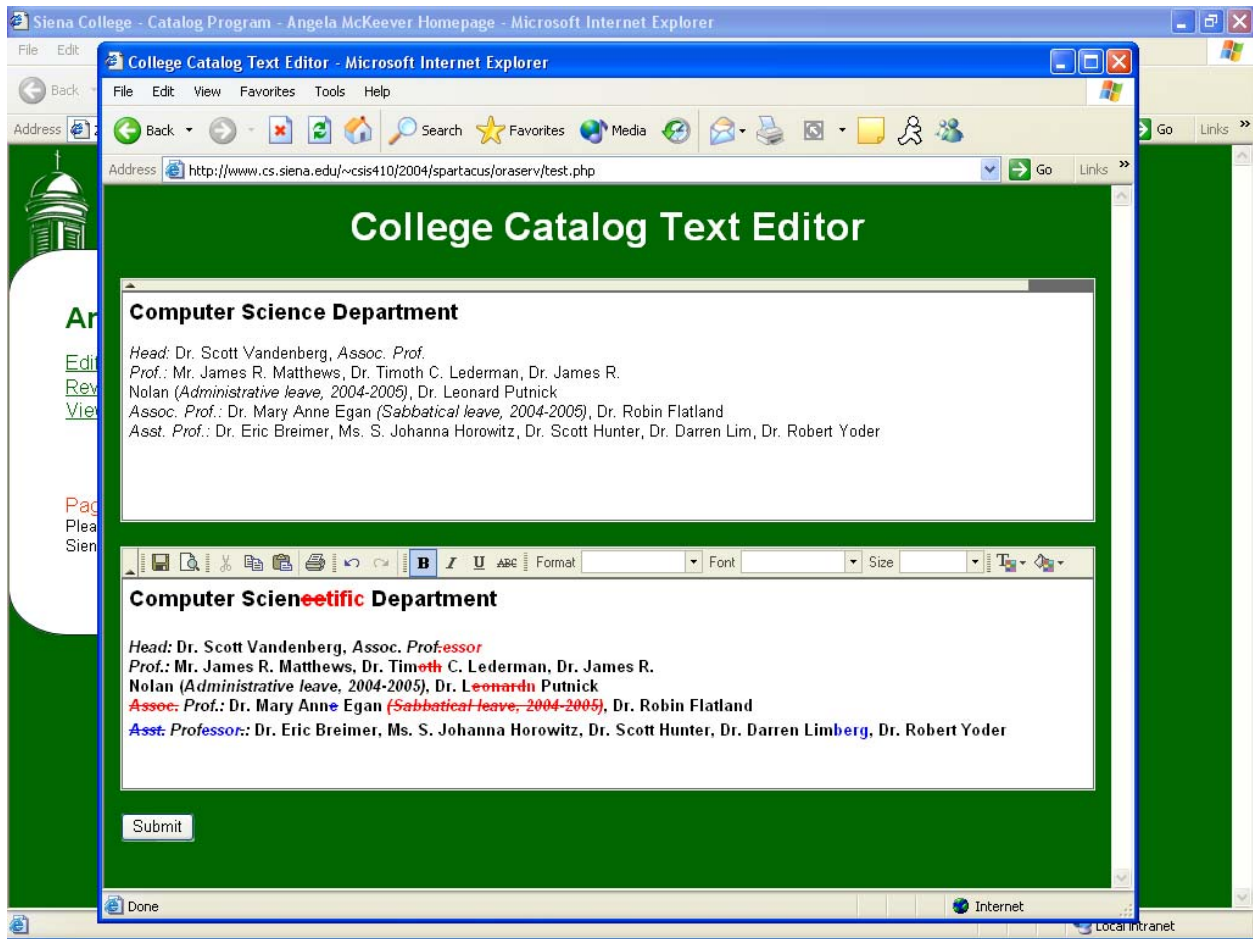
The *View Progress* link from the Assistant Dean home page allows the Assistant Dean to view the editing progress of the Department Heads in their school.



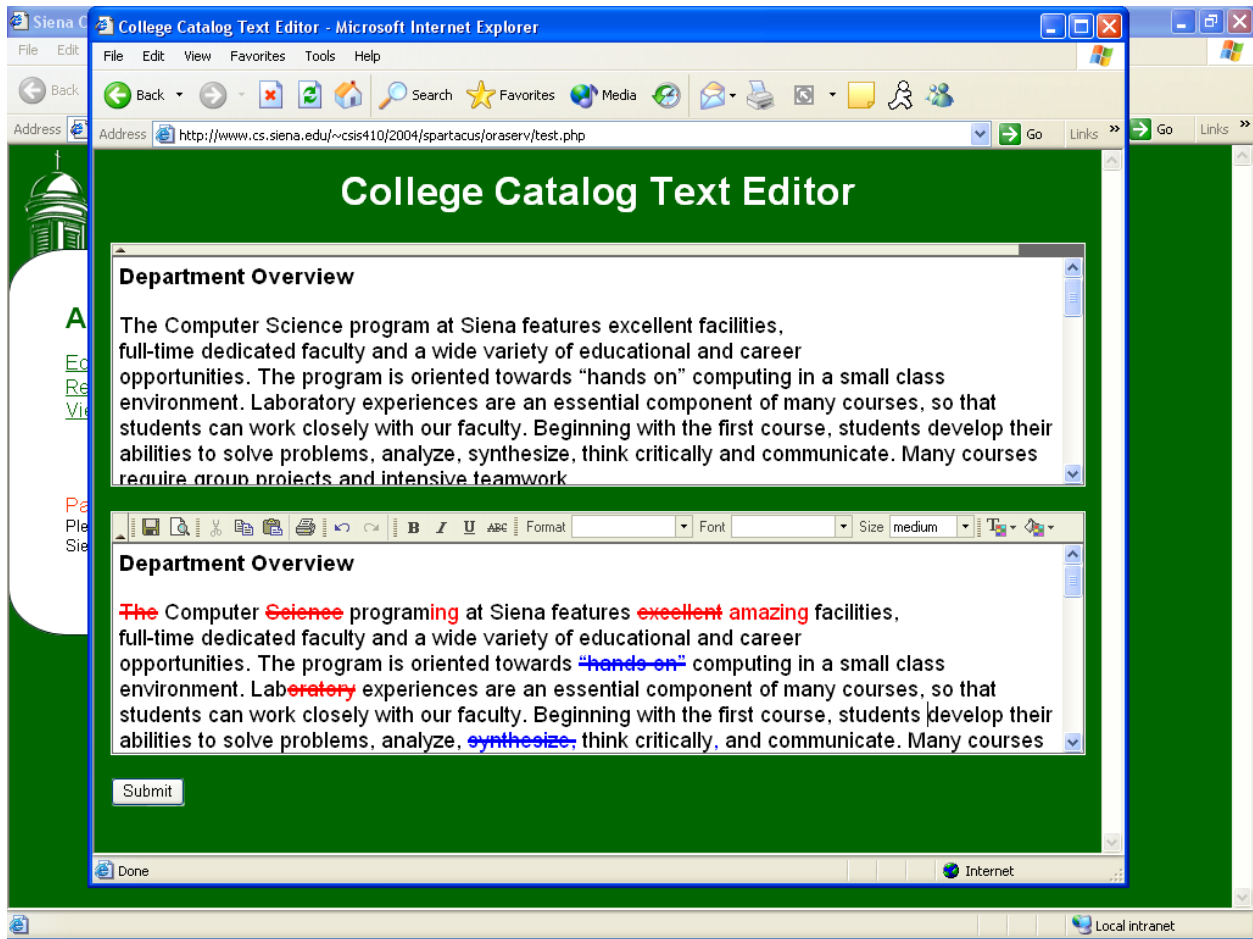
The *Review/Edit Changes* link on the Assistant Dean home page allows the Assistant Dean to review and/or edit changes for the Department Heads within their school.



The Assistant Dean can review or edit all of the same information that Dr. Vandenberg (or any other Department Head within the school of science) can review or edit. This is a page containing Dr. Vandenberg's sections of the catalog.

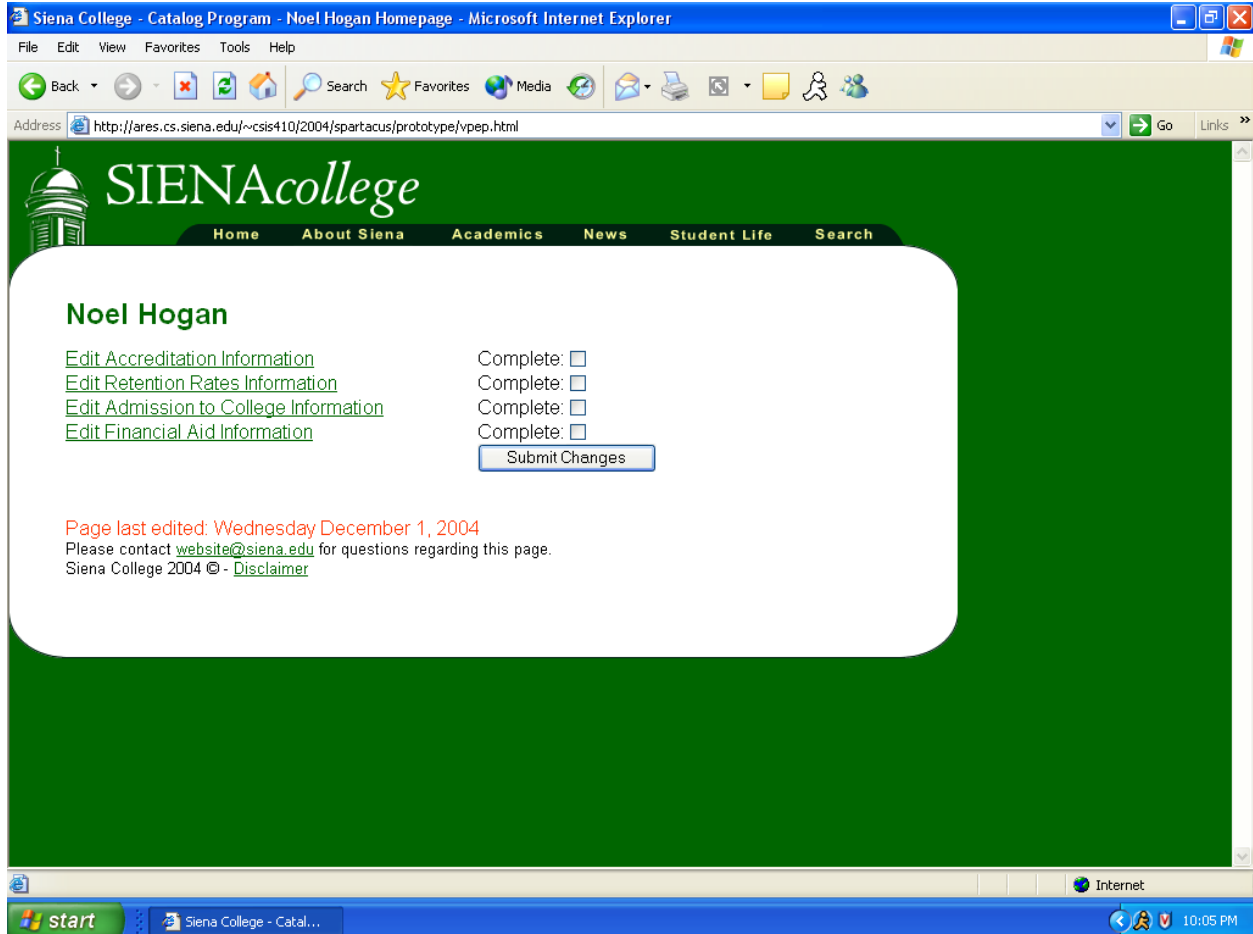


This editing page contains the same information as Dr. Vandenberg's page containing faculty information within the Computer Science Department. The only difference this time is that the copy of the text on the bottom frame of the page contains editing done by Dr. Vandenberg, and editing done by Ms. McKeever. Dr. Vandenberg's editing was done in red; Angela McKeever's edits were highlighted in blue font.



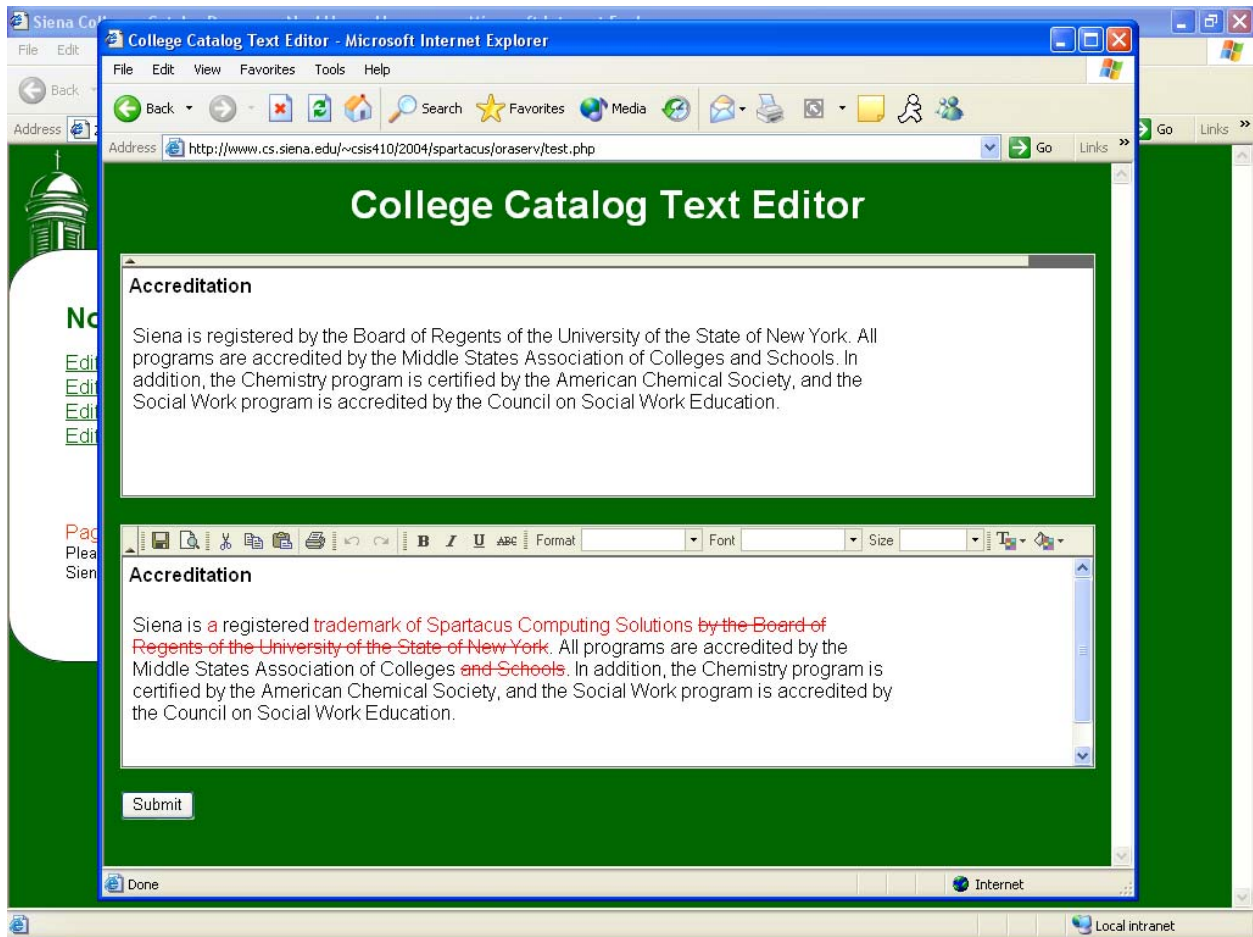
This editing page contains the same information as Dr. Vandenberg's page containing department information within the Computer Science Department. The only difference is that the copy of the text on the bottom frame of the page contains editing done by both Dr. Vandenberg, and editing done by Ms. McKeever. Dr. Vandenberg's editing was done in red; Angela McKeever's edits were highlighted in blue font.

## College Administrator Screens

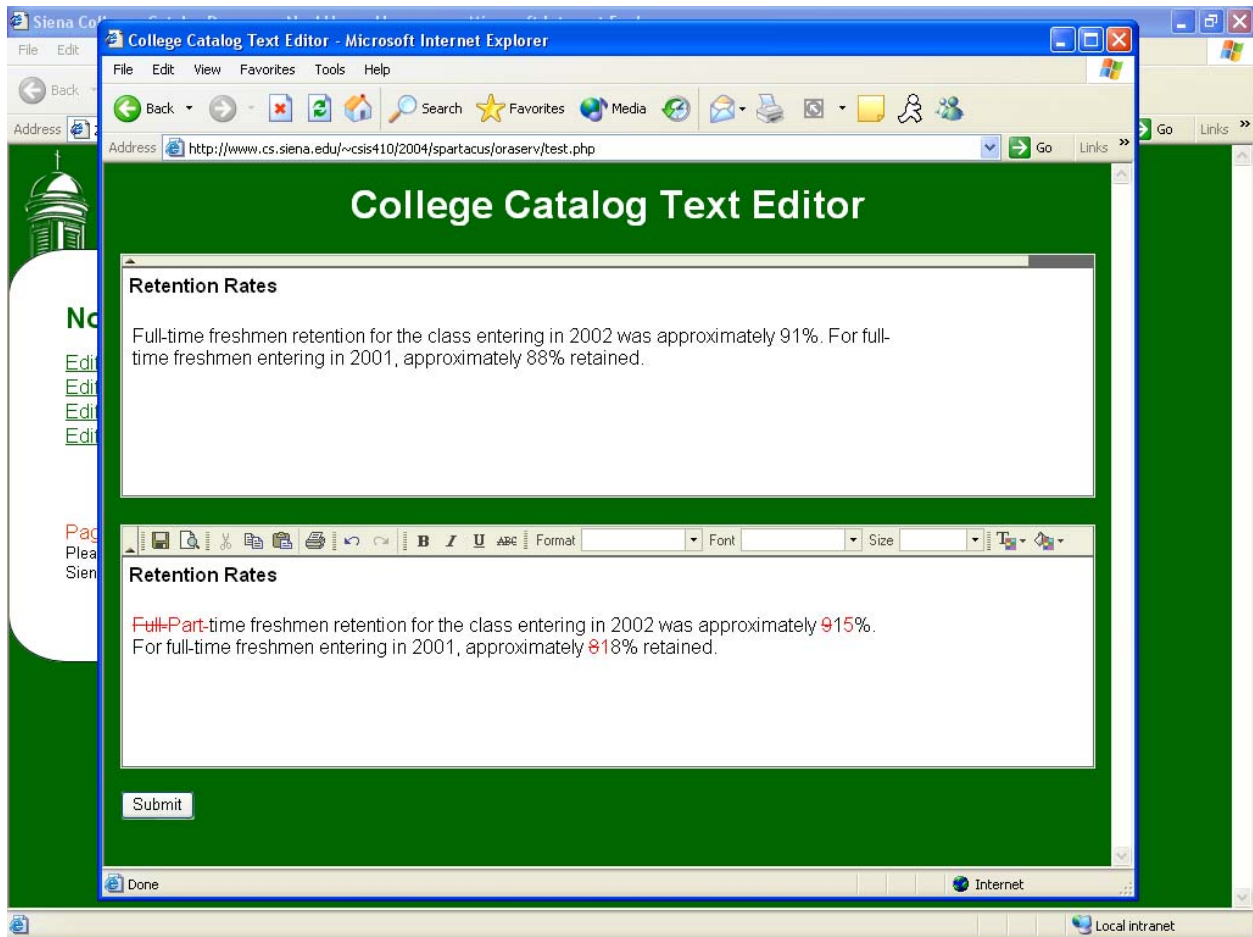


The home page for Vice Presidents (VP) of the college (as well as any college administrators who may have access to the system) contains links for all of the sections of the catalog that the given VP has access to, along with corresponding check boxes. When the VP clicks on a section of the catalog, the editing window will pop up and they will be able to make the desired changes. When they are finished editing the section they click the check box and click the *Submit Changes* button. When the *Submit Changes* button is clicked it updates the files and status of their catalog progress.

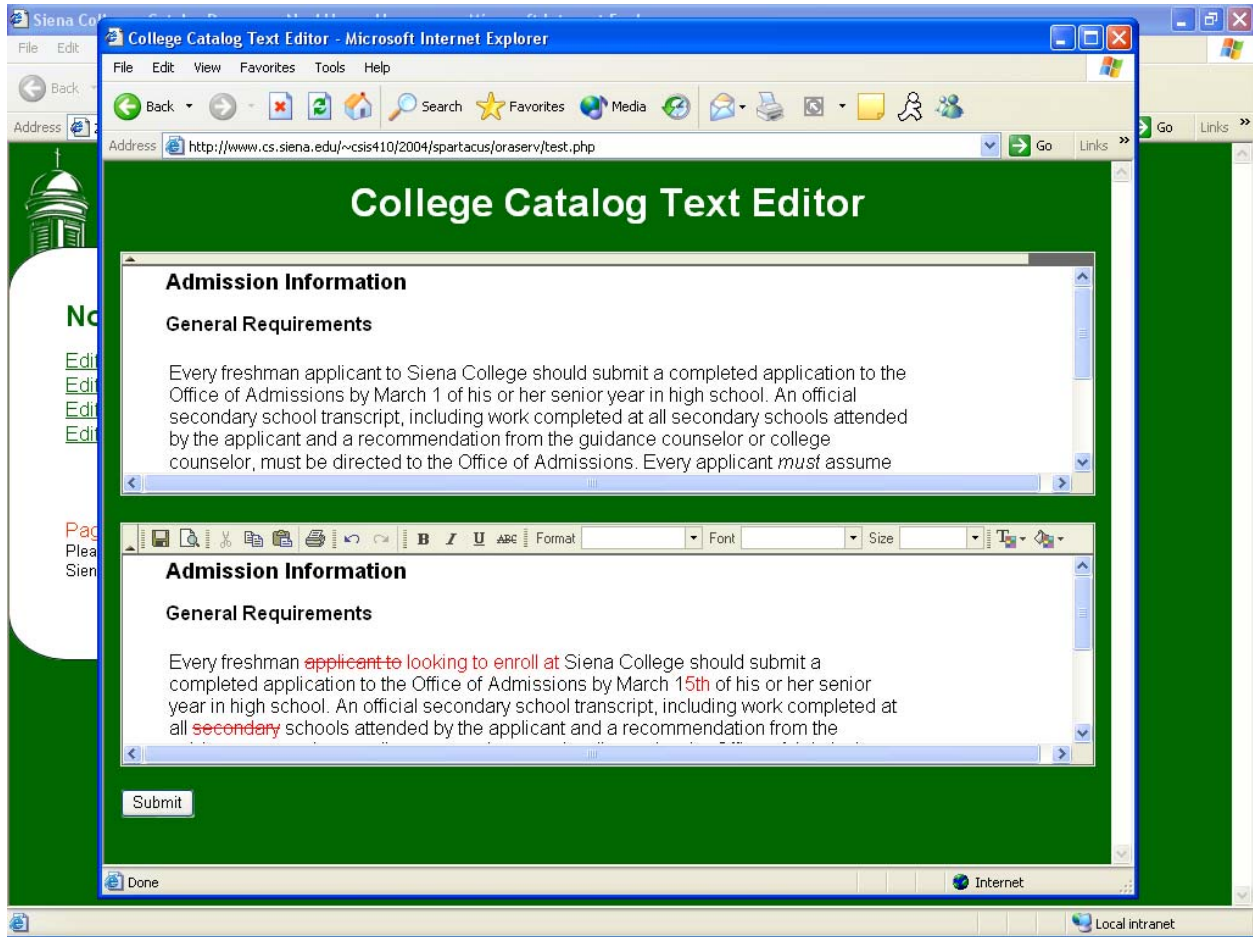




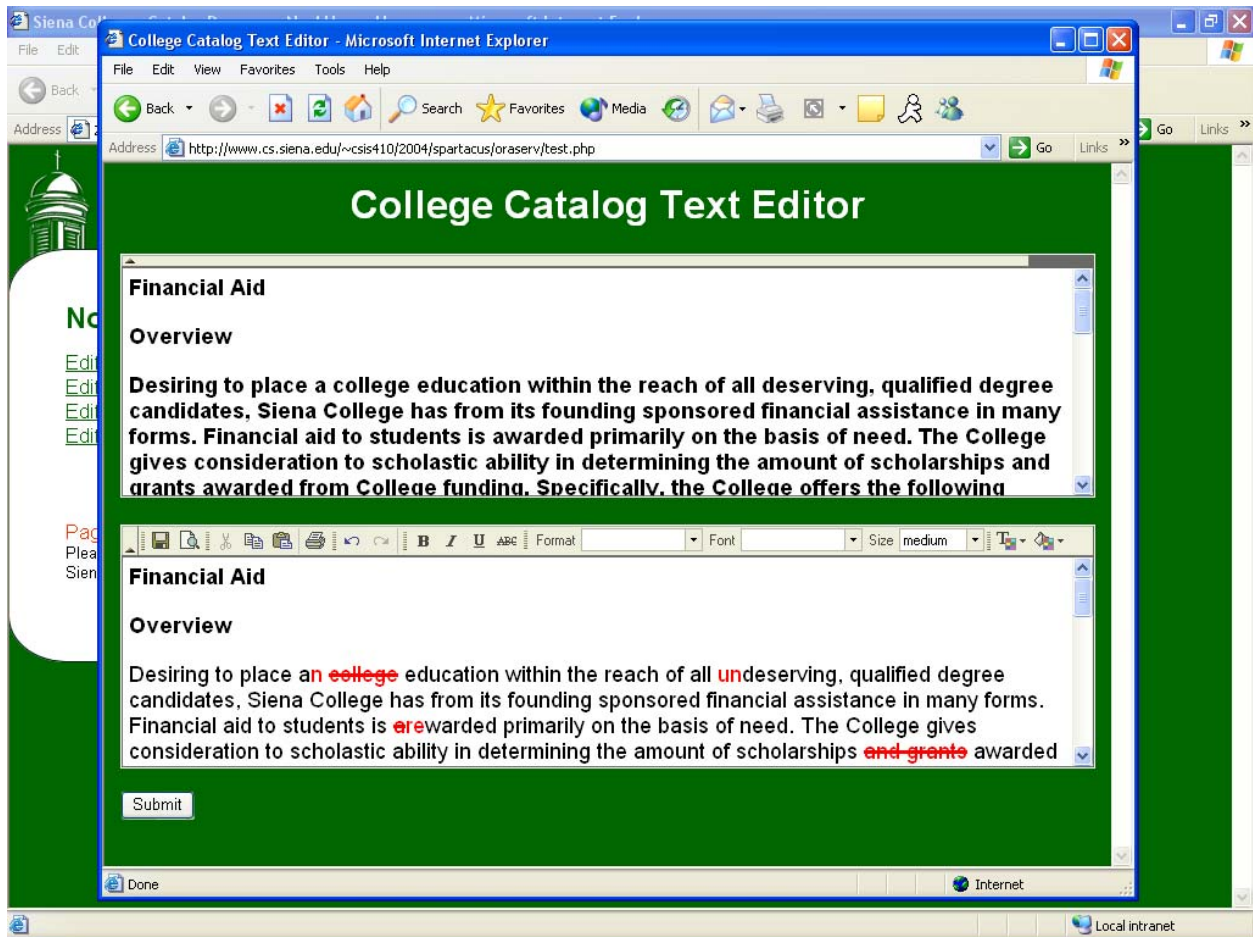
This is an example of a section of the catalog that Vice President of Enrollment and Planning Noel Hogan has the ability to access. As with all other editing windows, the top frame contains the original text in the current catalog, while the bottom has write permissions, allowing the user to edit the catalog's information.



This page also contains information that would require editing by Noel Hogan.



This page also contains information within the current catalog that would need to be edited by Noel Hogan.



This page also contains information that would need to be edited by Noel Hogan.

## **1.2: User Command Summary**

### **Log In (User Level 0, 1, 2)**

The log in screen is the first screen that users will encounter. The log in screen contains two fields. The first field is for the users' username, and the second field is for the users' password. After the user enters their username and password into the respective fields they need to click the login button to continue. Upon clicking the login button the system verifies the username and password to make sure they are valid before taking the user to their next respective screen. If upon clicking the login button the system tries to verify the user data but cannot find a valid match an error message appears on the screen directing the user to re-enter a valid username and password and try again.

### **Academic Affairs Home Page (User Level 0)**

If the user data provided at the log in screen is for the Academic Affairs administrator the user is brought to the Academic Affairs home page. This page is the root page for the Academic Affairs administrator. The page contains links to the pages that allow the user to do various tasks, these links are: Create or Edit Users, Check User Progress, Edit Catalog, Generate Publisher's Copy, View Current Catalog. When the user clicks on the Create or Edit Users link they are taken to a web page that displays links to other pages that allow the user to perform various tasks on users. When the user clicks the Check User Progress link they will be taken to a page that displays information relating to the progress of the other users of the system. The Edit Catalog link when clicked takes the user to a page where they have the options pertaining to the editing of different sections of the catalog. The Generate Publisher's Copy link when clicked compiles all of the catalog data into a document that can be sent electronically to the publisher. The View Current Catalog link when clicked opens up a new window with the current version of the catalog displayed.

### **Create/Edit User (User Level 0)**

This page consists of links to the pages that allows the user to perform various tasks regarding the creation, editing, and deletion of users. The links are as follows: Create New User, Edit Existing User, and Remove User. The Create New User link when clicked takes the user to a screen in which they are able to enter in the required information for new user creation. The Edit Existing User link when clicked brings the user to a screen that lists all the current users of the system. The Remove User link takes the user to a screen in which they have the ability to remove users from the system.

### **Create New User (User Level 0)**

This page contains various fields for the following: User Name, User Password, User Email, User Title, and User Office/Dept. There are also links to set permissions on various sections of the catalogs. To create a user, the administrative user enters information into the respective fields. The administrative user then clicks on the link for whatever category of the catalog permissions they wish to assign the new user. If the administrative user wishes to they can clear the form and start over if they wish to do so. After all new user information and permissions are set the administrative user can click the Create User button. Upon clicking the Create User button the new user will be created in the system with the entered information and password. If some information is missing a message saying so will appear.

### **Permissions (User Level 0)**

The permission screens are broken down into sections depending on what part of the catalog they are under. In each permission screen the areas are broken down even further into specific subsections. To set the permissions the user selects by clicking in the corresponding check boxes. When all desired boxes are clicked then the Grant Permissions button is pressed and the users' permissions are updated. If the user wants they can also clear all granted permissions by clicking the Clear Form button to unclick all checked permission boxes.

### **Edit User (User Level 0)**

The edit user screen displays a listing of all users, along with titles and other information. From this page the administrative user can click on the desired person's name that they wish to modify. When they click on the page they are brought to a page called Edit User Info

### **Edit User Info (User Level 0)**

The Edit User Info page is almost identical to the Create New User page. However, it is populated with the selected users' information in all of the corresponding fields. Also, the selected users' permissions are summarized so that the administrative user can easily tell what they have access to. From this screen the desired user can have any of their information and/or permissions modified.

### **Remove User (User Level 0)**

This screen allows for the administrative user to delete any user. To delete a user the administrative user selects the desired user from the list of all users. After the desired user is selected they the Remove User button is pushed and the user is deleted from the program.

### **User Progress (User Level 0)**

The User Progress screen displays the same information as the edit user screen. In addition this screen contains a summary of which users have completed their portion of the catalog. The administrative user can then click on a users name and a message will automatically be generated and sent to the user corresponding user reminding them to complete their portion of the catalog.

### **Review/Edit Changes (User Level 0)**

The Review/Edit Changes screen allows the administrative user to select a user from a list of all users. The administrative user is then redirected to another screen pertaining to the actual editing of sections.

### **Review/Edit *User Name* Changes (User Level 0)**

The Review/Edit *User Name* Changes allows the administrative user to click on the section of the catalog they wish to review for the previously selected user. Upon clicking on the section of the catalog the sections pop up for editing. When the administrative user finished making changes they click in the complete box and click submit changes to update the file.

### **Assistant Dean Home Page (User Level 1)**

The Assistant Dean Home Page is the page that an Assistant Dean is taken to when they log in at the Log In screen. It contains links to all of the different that the Assistant Dean needs to change or monitor. The links include the following: Edit *Given School* General Information, Review Progress, and Review/Edit Changes. The Edit *Given School* General Information link when clicked opens the general information section of the given school for editing. When editing is completed the appropriate check box should be checked to indicate that the user is finished editing that section. The View Progress link takes the user to a system of pages and functionality much like the View Progress link for the User Level 0. However, the Assistant Dean can only view the progress of the Department Heads in their school. The Review/Edit Changes link is much like the series of Review/Edit Changes pages that the User Level 0 has. However, the Assistant Dean can only review and/or edit changes for the Department Heads in their school.

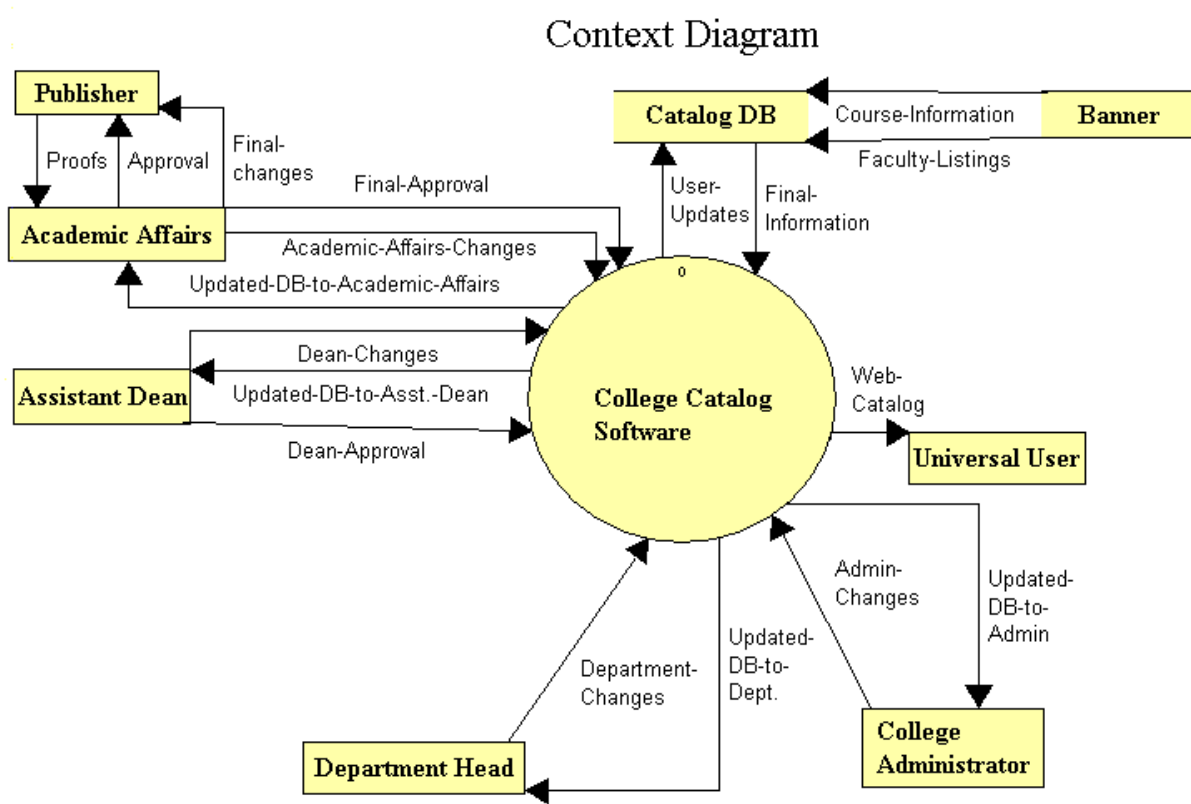
### **Vice President Home Page (User Level 1)**

The Vice President Home Page contains links for all of the sections of the catalog that the given VP has access to along with corresponding check boxes. When the VP clicks on a section of the catalog the editing window will pop up and they will be able to make the desired changes. When they are finished editing the section they click the check box and click the Submit Changes button. When the Submit Changes button is clicked it updates the files and status of their catalog progress.

### **Department Head Home Page (User Level 2)**

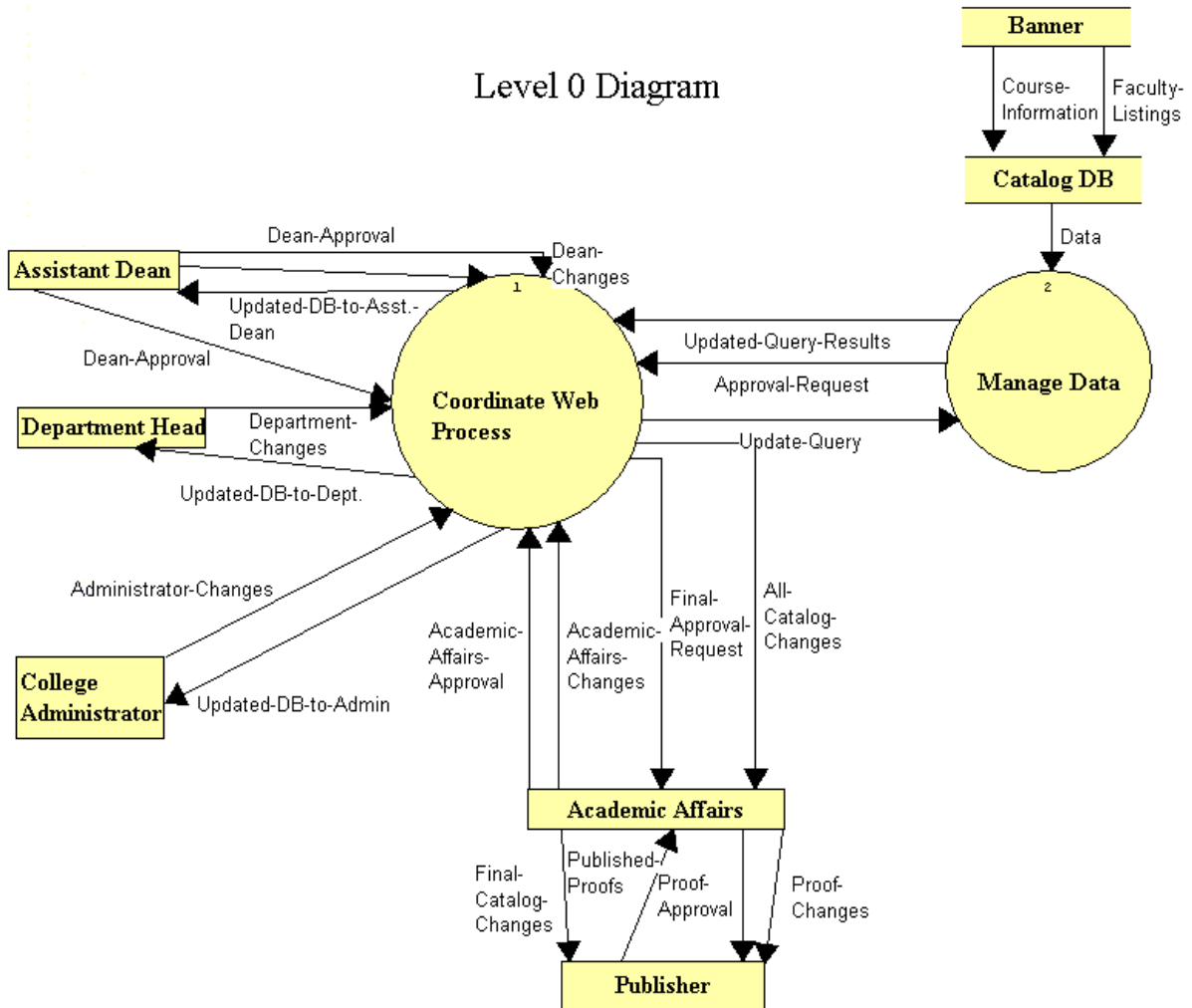
The Department Head Home Page contains links for all of the sections of the catalog that the given Department Head has access to change, along with corresponding check boxes, and a link to view the course descriptions in their given department. The Department Head clicks on his/her given link for the section of catalog they wish to edit and an editing window pops up. When they are finished editing the section they click the check box and click the Submit Changes button to submit their changes and update their catalog progress. When the View Course Description is clicked the Department Head will be able to view the course descriptions that are in their department in a read only manner.

### 1.3: Detailed Data Flow Diagrams

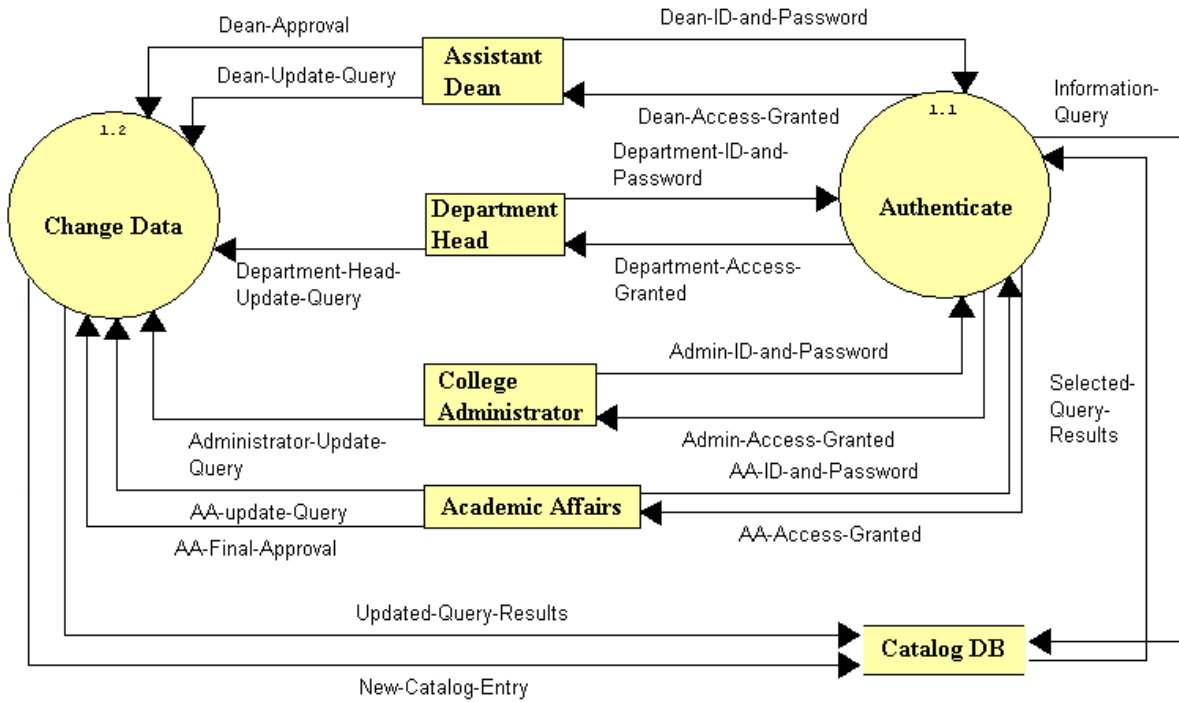




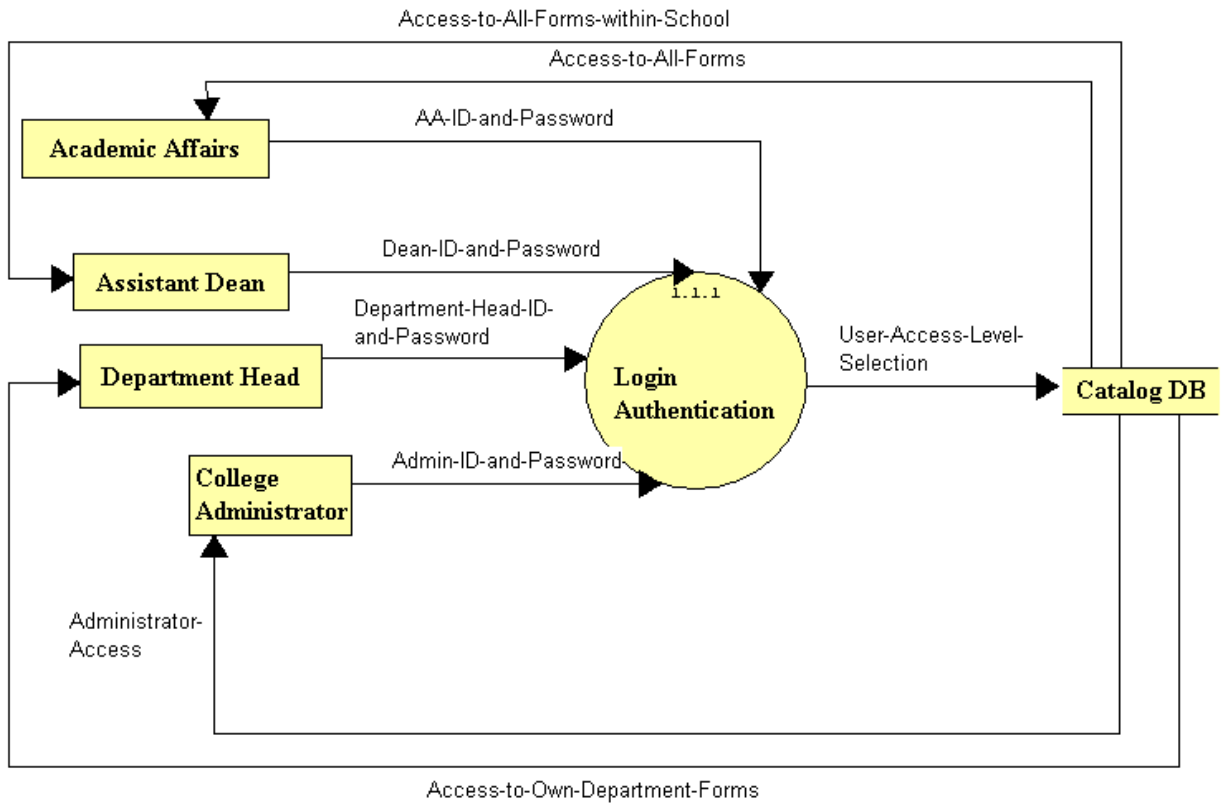
## Level 0 Diagram



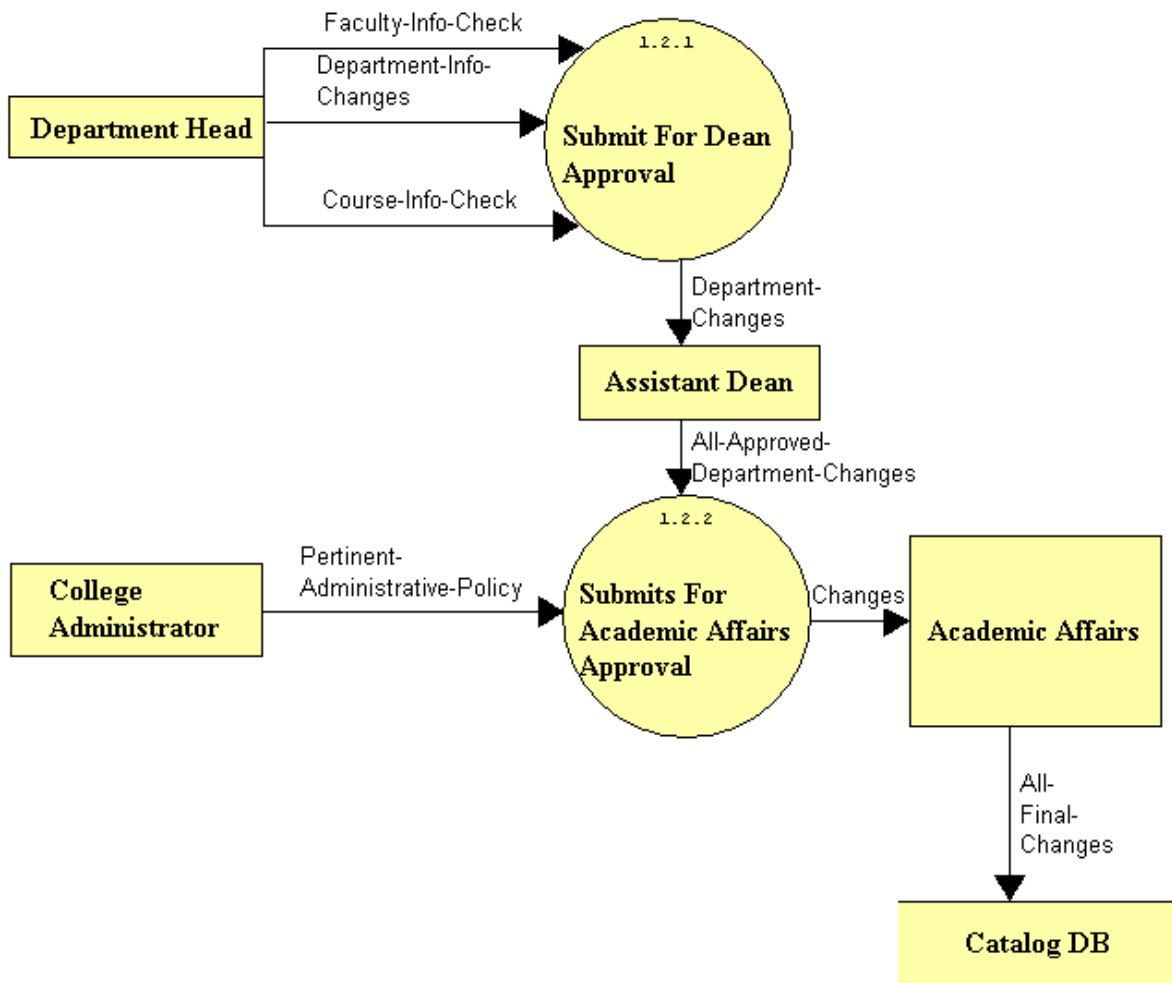
## Level 1 Diagram - Coordinate Web Process



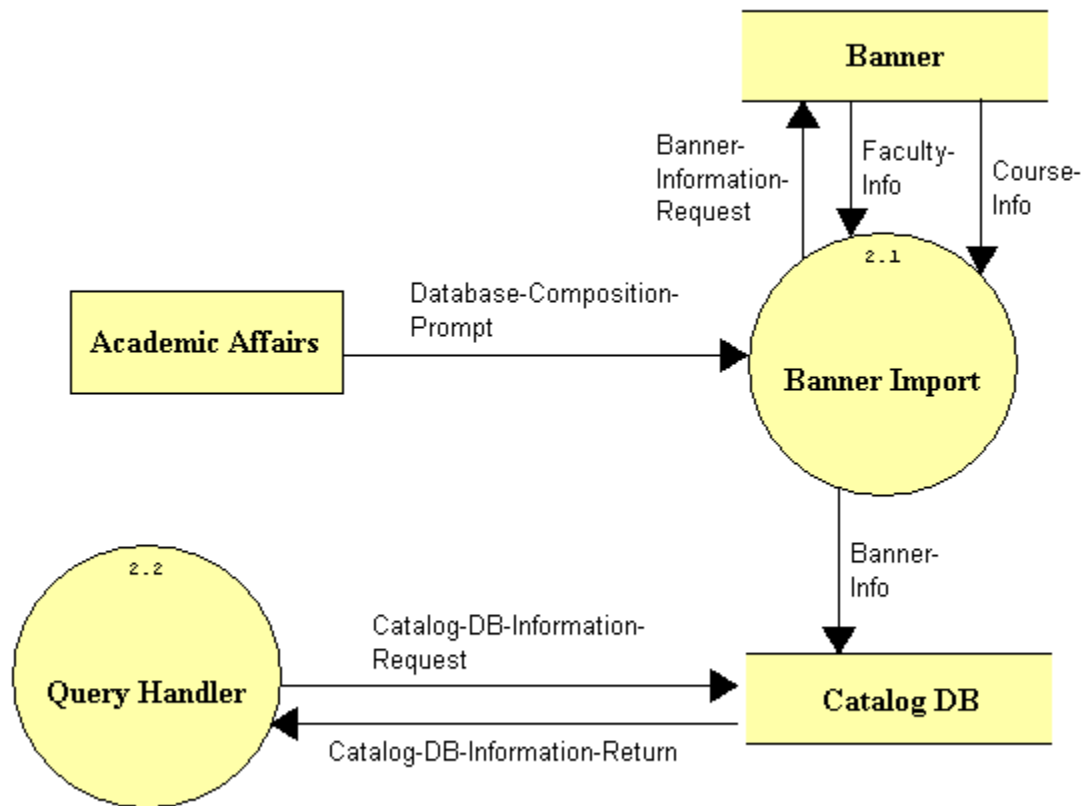
# Authenticate



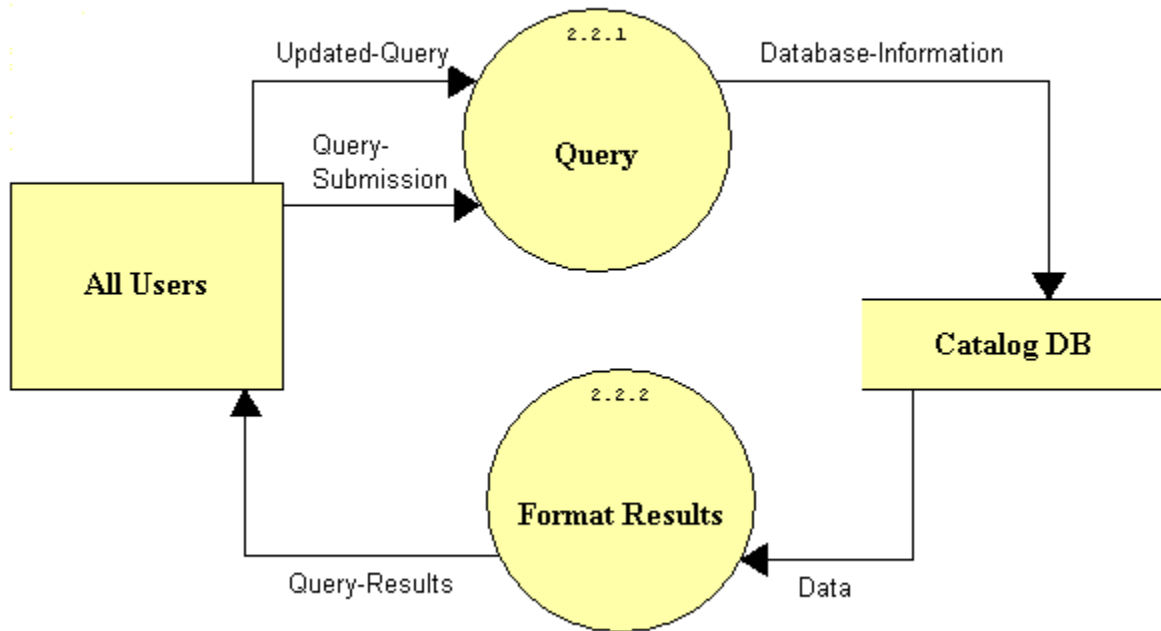
## Change Data



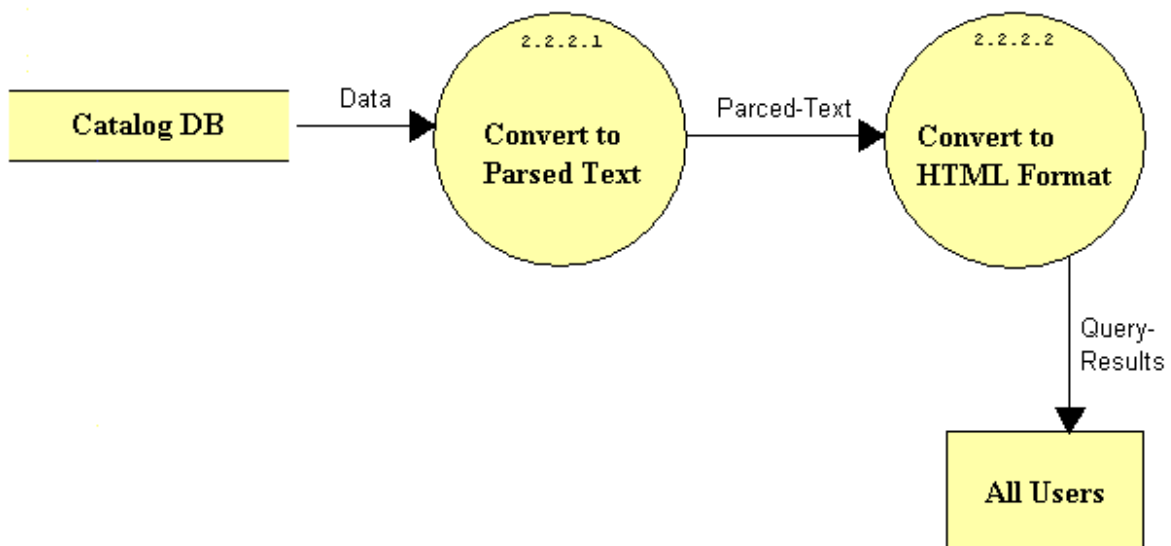
## Level 1 Diagram - Manage Data



## Query Handler



## Format Results



## 1.4: Logical Data Dictionary

The following information describes the data elements within the data flow diagrams (located in section 1.3 Detailed Data Flow Diagrams). The data elements are separated by the location (i.e., which data flow diagram) they are located within.

### ***Location – Context Diagram:***

#### **Academic Affairs Source/Sink**

*Description:*

In actuality, signifies the head user/system administrator (i.e. Ms. Zimmerman), who has complete control

*Input Flows:*

Proofs

Updated-DB-to-Academic-Affairs

*Output Flows:*

Approval

Final-changes

Final-Approval

Academic-Affairs-Changes

---

#### **Academic-Affairs-Changes Data Flow**

*Description:*

Academic Affairs can make any changes to the catalog.

*Source:* Academic Affairs (Source/Sink)

*Dest:* College Catalog Software (Process)

---

#### **Admin-Changes Data Flow**

*Description:*

Administrator changes are made to any necessary sections of the catalog that are not included in the academic portions

*Source:* College Administrator (Source/Sink)

*Dest:* College Catalog Software (Process)

*Date Last Altered:* 12/2/2004 *Date Created:* 10/30/2004

---

#### **Approval Data Flow**

*Description:*

Final approval of the College Catalog to be printed.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Publisher (Source/Sink)

---

#### **Assistant Dean Source/Sink**

*Description:*

Anyone at the Dean level of the college; has the ability to access the database, make changes, and monitor

*Input Flows:*

Updated-DB-to-Asst.-Dean

*Output Flows:*

Dean-Approval

Dean-Changes

---

**Banner File***Description:*

Data store; Database used by Siena College that contains course information and faculty listings; software

*Output Flows:*

Course-Information

Faculty-Listings

---

**Catalog DB File***Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

Course-Information

Faculty-Listings

User-Updates

*Output Flows:*

Final-Information

---

**College Administrator Source/Sink***Description:*

Makes changes to administrative policies in areas not included in the schools.

*Input Flows:*

Updated-DB-to-Admin

*Output Flows:*

Admin-Changes

---

**College Catalog Software Process***Description:*

Allows for editing of the college catalog

*Input Flows:*

Final-Approval

Dean-Approval

Dean-Changes

Academic-Affairs-Changes

Department-Changes

Admin-Changes

Final-Information

*Output Flows:*

Updated-DB-to-Academic-Affairs

Updated-DB-to-Asst.-Dean

Updated-DB-to-Dept.

Updated-DB-to-Admin

Web-Catalog

User-Updates

---

**Course-Information Data Flow***Description:*

Contains course information.

*Source:* Banner (File)

*Dest:* Catalog DB (File)

---



### **Dean-Approval Data Flow**

*Description:*

The Dean must approve changes made to the departments within its school.

*Source:* Assistant Dean (Source/Sink)

*Dest:* College Catalog Software (Process)

---

### **Dean-Changes Data Flow**

*Description:*

The Dean can make any changes to any of the departments within its particular school.

*Source:* Assistant Dean (Source/Sink)

*Dest:* College Catalog Software (Process)

---

### **Department Head Source/Sink**

*Description:*

Makes changes to the particular scholastic department

*Input Flows:*

Updated-DB-to-Dept.

*Output Flows:*

Department-Changes

---

### **Department-Changes Data Flow**

*Description:*

Department heads make changes to only their specific department.

*Source:* Department Head (Source/Sink)

*Dest:* College Catalog Software (Process)

---

### **Faculty-Listings Data Flow**

*Description:*

Faculty information

*Source:* Banner (File)

*Dest:* Catalog DB (File)

---

### **Final-Approval Data Flow**

*Description:*

Academic Affairs has the final approval on all changes to be made to the catalog.

*Source:* Academic Affairs (Source/Sink)

*Dest:* College Catalog Software (Process)

---

### **Final-changes Data Flow**

*Description:*

The Academic Affairs Office sends any final changes it needs to make to the catalog.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Publisher (Source/Sink)

---

### **Final-Information Data Flow**

*Description:*

This information is any information sent from the database back into the College Catalog Software.

*Source:* Catalog DB (File)

*Dest:* College Catalog Software (Process)

---

### **Proofs Data Flow**

*Description:*

Proofs are the drafts of the catalog that are sent back for approval.

*Source:* Publisher (Source/Sink)

*Dest:* Academic Affairs (Source/Sink)

---

### **Publisher Source/Sink**

*Description:*

Outside publishing editor; puts together the hard copy of the final college catalog

*Input Flows:*

Approval

Final-changes

*Output Flows:*

Proofs

---

### **Universal User Source/Sink**

*Description:*

Anyone with access to the catalog; access limited to read-only privileges (can read the catalog)

*Input Flows:*

Web-Catalog

---

### **Updated-DB-to-Academic-Affairs Data Flow**

*Description:*

Academic Affairs is notified of any changes made to the College Catalog database.

*Source:* College Catalog Software (Process)

*Dest:* Academic Affairs (Source/Sink)

---

### **Updated-DB-to-Admin Data Flow**

*Description:*

The College Administrators can see any changes made by anyone else to their sections.

*Source:* College Catalog Software (Process)

*Dest:* College Administrator (Source/Sink)

---

### **Updated-DB-to-Asst.-Dean Data Flow**

*Description:*

The Dean will be notified whenever changes are made to any departments within the particular school.

*Source:* College Catalog Software (Process)

*Dest:* Assistant Dean (Source/Sink)

---

### **Updated-DB-to-Dept. Data Flow**

*Description:*

Department Heads can see any changes made by anyone else to their sections.

*Source:* College Catalog Software (Process)

*Dest:* Department Head (Source/Sink)

---

### **User-Updates Data Flow**

*Description:*

Any updates made to the catalog database.

*Source:* College Catalog Software (Process)

*Dest:* Catalog DB (File)

---

### **Web-Catalog Data Flow**

*Description:*

The Web Catalog is available to all users.

*Source:* College Catalog Software (Process)

*Dest:* Universal User (Source/Sink)

---

### **Location – Level 0 Diagram:**

#### **Academic Affairs Source/Sink**

*Description:*

In actuality, signifies the head user/system administrator (i.e. Ms. Zimmerman), who has complete control

*Input Flows:*

Final-Approval-Request

All-Catalog-Changes

Published-Proofs

*Output Flows:*

Academic-Affairs-Approval

Academic-Affairs-Changes

Proof-Approval

Final-Catalog-Changes

Proof-Changes

---

#### **Academic-Affairs-Approval Data Flow**

*Description:*

Academic Affairs makes all final approvals.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Coordinate Web Process (Process)

---

#### **Academic-Affairs-Changes Data Flow**

*Description:*

Academic Affairs can make any changes to the catalog.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Coordinate Web Process (Process)

---

#### **Administrator-Changes Data Flow**

*Source:* College Administrator (Source/Sink)

*Dest:* Coordinate Web Process (Process)

---

#### **All-Catalog-Changes Data Flow**

*Description:*

Academic Affairs is notified of any Catalog changes.

*Source:* Coordinate Web Process (Process)

*Dest:* Academic Affairs (Source/Sink)

---

#### **Approval-Request Data Flow**

*Description:*

Requests that changes be approved.

*Source:* Manage Data (Process)

*Dest:* Coordinate Web Process (Process)

---

### **Assistant Dean Source/Sink**

*Description:*

Anyone at the Dean level of the college; has the ability to access the database, make changes, and monitor

*Input Flows:*

Updated-DB-to-Asst.-Dean

*Output Flows:*

Dean-Changes

Dean-Approval

Dean-Approval

---

### **Banner File**

*Description:*

Data store; Database used by Siena College that contains course information and faculty listings; software

*Output Flows:*

Course-Information

Faculty-Listings

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

Course-Information

Faculty-Listings

*Output Flows:*

Data

---

### **College Administrator Source/Sink**

*Description:*

Makes changes to administrative policies in areas not included in the schools.

*Input Flows:*

Updated-DB-to-Admin

*Output Flows:*

Administrator-Changes

---

### **Coordinate Web Process Process**

*Description:*

Coordinates changes made to the database via the internet; allows for authorized users to login to system

*Input Flows:*

Dean-Changes

Dean-Approval

Department-Changes

Administrator-Changes

Academic-Affairs-Approval

Academic-Affairs-Changes

Updated-Query-Results

Approval-Request

Dean-Approval

*Output Flows:*

Final-Approval-Request

All-Catalog-Changes

Update-Query

Updated-DB-to-Asst.-Dean

Updated-DB-to-Dept.

Updated-DB-to-Admin

---

### **Course-Information Data Flow**

*Description:*

Contains course information.

*Source:* Banner (File)

*Dest:* Catalog DB (File)

---

### **Data Data Flow**

*Description:*

Contains any data coming from the College Catalog DB.

*Source:* Catalog DB (File)

*Dest:* Manage Data (Process)

---

### **Dean-Approval Data Flow**

*Description:*

The Dean must approve changes made to the departments within its school.

*Source:* Assistant Dean (Source/Sink)

*Dest:* Coordinate Web Process (Process)

---

### **Dean-Changes Data Flow**

*Description:*

The Dean can make any changes to any of the departments within its particular school.

*Source:* Assistant Dean (Source/Sink)

*Dest:* Coordinate Web Process (Process)

---

### **Department Head Source/Sink**

*Description:*

Makes changes to the particular scholastic department

*Input Flows:*

Updated-DB-to-Dept.

*Output Flows:*

Department-Changes

---

### **Department-Changes Data Flow**

*Description:*

Department heads make changes to only their specific department.

*Source:* Department Head (Source/Sink)

*Dest:* Coordinate Web Process (Process)

---

### **Faculty-Listings Data Flow**

*Description:*

Faculty information

*Source:* Banner (File)

*Dest:* Catalog DB (File)

---

### **Final-Approval-Request Data Flow**

*Description:*

All users must submit their changes for final approval.

*Source:* Coordinate Web Process (Process)

*Dest:* Academic Affairs (Source/Sink)

---

### **Final-Catalog-Changes Data Flow**

*Description:*

All final Catalog changes are sent to the publisher.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Publisher (Source/Sink)

---

### **Manage Data Process**

*Description:*

Process to manage the data submitted through the web interface based on authorization and approval

*Input Flows:*

Update-Query

Data

*Output Flows:*

Updated-Query-Results

Approval-Request

---

### **Proof-Approval Data Flow**

*Description:*

The proofs are approved and are ready to be printed.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Publisher (Source/Sink)

---

### **Proof-Changes Data Flow**

*Description:*

Academic Affairs sends any changes to the proofs.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Publisher (Source/Sink)

---

### **Published-Proofs Data Flow**

*Description:*

The published proofs are sent back for approval.

*Source:* Publisher (Source/Sink)

*Dest:* Academic Affairs (Source/Sink)

---

### **Publisher Source/Sink**

*Description:*

Outside publishing editor; puts together the hard copy of the final college catalog

*Input Flows:*

Proof-Approval

Final-Catalog-Changes

Proof-Changes

*Output Flows:*

Published-Proofs

---

### **Updated-DB-to-Admin Data Flow**

*Description:*

The College Administrators can see any changes made by anyone else to their sections.

*Source:* Coordinate Web Process (Process)

*Dest:* College Administrator (Source/Sink)

---

### **Updated-DB-to-Asst.-Dean Data Flow**

*Description:*

The Dean will be notified whenever changes are made to any departments within the particular school.

*Source:* Coordinate Web Process (Process)

*Dest:* Assistant Dean (Source/Sink)

---

### **Updated-DB-to-Dept. Data Flow**

*Description:*

Department Heads can see any changes made by anyone else to their sections.

*Source:* Coordinate Web Process (Process)

*Dest:* Department Head (Source/Sink)

---

### **Updated-Query-Results Data Flow**

*Description:*

Submits any update queries that are approved to the catalog database.

*Source:* Manage Data (Process)

*Dest:* Coordinate Web Process (Process)

---

### **Update-Query Data Flow**

*Description:*

Submission for changes to be made to the Catalog database.

*Source:* Coordinate Web Process (Process)

*Dest:* Manage Data (Process)

---

## ***Location – Level 1 Diagram – Coordinate Web Processes:***

### **AA-Access-Granted Data Flow**

*Description:*

Access respective to the user rights of the Academic Affairs head user are granted, pending authentication of the user

*Source:* Authenticate (Process)

*Dest:* Academic Affairs (Source/Sink)

---

### **AA-Final-Approval Data Flow**

*Description:*

The Academic Affairs head user (i.e., Ms. Zimmerman) must approve all final changes to the catalog data

*Source:* Academic Affairs (Source/Sink)

*Dest:* Change Data (Process)

---

### **AA-ID-and-Password Data Flow**

*Description:*

The head user from the Academic Affairs office (i.e., Ms. Zimmerman) submits a user ID and password to

*Source:* Academic Affairs (Source/Sink)

*Dest:* Authenticate (Process)

---

### **AA-update-Query Data Flow**

*Description:*

The Academic Affairs head user (i.e., Ms. Zimmerman) has the ability to submit information to be update

*Source:* Academic Affairs (Source/Sink)

*Dest:* Change Data (Process)

---

### **Academic Affairs Source/Sink**

*Description:*

In actuality, signifies the head user/system administrator (i.e. Ms. Zimmerman), who has complete control

*Input Flows:*

AA-Access-Granted

*Output Flows:*

AA-ID-and-Password

AA-update-Query

AA-Final-Approval

---

### **Admin-Access-Granted Data Flow**

*Description:*

Access respective to the user rights of a College Administrator are granted, pending authentication of the user

*Source:* Authenticate (Process)

*Dest:* College Administrator (Source/Sink)

---

### **Admin-ID-and-Password Data Flow**

*Description:*

A College Administrator submits a user ID and password to the system for authentication

*Source:* College Administrator (Source/Sink)

*Dest:* Authenticate (Process)

---

### **Administrator-Update-Query Data Flow**

*Description:*

A College Administrator has the ability to submit information to be updated within the database.

*Source:* College Administrator (Source/Sink)

*Dest:* Change Data (Process)

---

### **Assistant Dean Source/Sink**

*Description:*

Anyone at the Dean level of the college; has the ability to access the database, make changes, and monitor

*Input Flows:*

Dean-Access-Granted

*Output Flows:*

Dean-ID-and-Password

Dean-Update-Query

Dean-Approval

---



### **Authenticate Process**

*Description:*

Verify username and password at login as valid, authorized user

*Input Flows:*

Dean-ID-and-Password

Department-ID-and-Password

Admin-ID-and-Password

AA-ID-and-Password

Selected-Query-Results

*Output Flows:*

Dean-Access-Granted

Department-Access-Granted

Admin-Access-Granted

AA-Access-Granted

Information-Query

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

Information-Query

Updated-Query-Results

New-Catalog-Entry

*Output Flows:*

Selected-Query-Results

---

### **Change Data Process**

*Description:*

The process to submit changes to the current data in the catalog database

*Input Flows:*

AA-update-Query

AA-Final-Approval

Administrator-Update-Query

Department-Head-Update-Query

Dean-Update-Query

Dean-Approval

*Output Flows:*

Updated-Query-Results

New-Catalog-Entry

---

### **College Administrator Source/Sink**

*Description:*

Makes changes to administrative policies in areas not included in the schools.

*Input Flows:*

Admin-Access-Granted

*Output Flows:*

Admin-ID-and-Password

Administrator-Update-Query

---

### **Dean-Access-Granted Data Flow**

*Description:*

Access respective to the user rights of the Assistant Dean are granted, pending authentication of the user ID

*Source:* Authenticate (Process)

*Dest:* Assistant Dean (Source/Sink)

---

### **Dean-Approval Data Flow**

*Description:*

The Dean must approve changes made to the departments within its school.

*Source:* Assistant Dean (Source/Sink)

*Dest:* Change Data (Process)

---

### **Dean-ID-and-Password Data Flow**

*Description:*

The Assistant Dean submits a user ID and password to the system for authentication

*Source:* Assistant Dean (Source/Sink)

*Dest:* Authenticate (Process)

---

### **Dean-Update-Query Data Flow**

*Description:*

The Assistant Dean has the ability to submit information to be updated within the database.

*Source:* Assistant Dean (Source/Sink)

*Dest:* Change Data (Process)

---

### **Department Head Source/Sink**

*Description:*

Makes changes to the particular scholastic department

*Input Flows:*

Department-Access-Granted

*Output Flows:*

Department-ID-and-Password

Department-Head-Update-Query

---

### **Department-Access-Granted Data Flow**

*Description:*

Access respective to the user rights of the Department Head are granted, pending authentication of the user

*Source:* Authenticate (Process)

*Dest:* Department Head (Source/Sink)

---

### **Department-Head-Update-Query Data Flow**

*Description:*

The Department Head has the ability to submit information to be updated within the database.

*Source:* Department Head (Source/Sink)

*Dest:* Change Data (Process)

---

### **Department-ID-and-Password Data Flow**

*Description:*

The Department Head submits a user ID and password to the system for authentication

*Source:* Department Head (Source/Sink)

*Dest:* Authenticate (Process)

---

**Information-Query Data Flow***Description:*

Checks with catalog database to make sure user IDs and passwords are saved in the system.

*Source:* Authenticate (Process)

*Dest:* Catalog DB (File)

---

**New-Catalog-Entry Data Flow***Description:*

Enters any new catalog entries that were added by any authorized users with the ability to update into the

*Source:* Change Data (Process)

*Dest:* Catalog DB (File)

---

**Selected-Query-Results Data Flow***Description:*

Privileges of a particular user (based on the user ID and password submitted in the information query) are

*Source:* Catalog DB (File)

*Dest:* Authenticate (Process)

---

**Updated-Query-Results Data Flow***Description:*

Submits any update queries that are approved to the catalog database.

*Source:* Change Data (Process)

*Dest:* Catalog DB (File)

---

***Location – Authenticate:*****AA-ID-and-Password Data Flow***Description:*

The head user from the Academic Affairs office (i.e., Ms. Zimmerman) submits a user ID and password to

*Source:* Academic Affairs (Source/Sink)

*Dest:* Login Authentication (Process)

---

**Academic Affairs Source/Sink***Description:*

In actuality, signifies the head user/system administrator (i.e. Ms. Zimmerman), who has complete control

*Input Flows:*

Access-to-All-Forms

*Output Flows:*

AA-ID-and-Password

---

**Access-to-All-Forms Data Flow***Description:*

Access to all catalog content is granted

*Source:* Catalog DB (File)

*Dest:* Academic Affairs (Source/Sink)

---

### **Access-to-All-Forms-within-School Data Flow**

*Description:*

Access to all content for a particular school is granted

*Source:* Catalog DB (File)

*Dest:* Assistant Dean (Source/Sink)

---

### **Access-to-Own-Department-Forms Data Flow**

*Description:*

Access to individual departments given to Department Heads

*Source:* Catalog DB (File)

*Dest:* Department Head (Source/Sink)

---

### **Admin-ID-and-Password Data Flow**

*Description:*

A College Administrator submits a user ID and password to the system for authentication

*Source:* College Administrator (Source/Sink)

*Dest:* Login Authentication (Process)

---

### **Administrator-Access Data Flow**

*Description:*

College administrator access is granted to their particular office(s).

*Source:* Catalog DB (File)

*Dest:* College Administrator (Source/Sink)

---

### **Assistant Dean Source/Sink**

*Description:*

Anyone at the Dean level of the college; has the ability to access the database, make changes, and monitor

*Input Flows:*

Access-to-All-Forms-within-School

*Output Flows:*

Dean-ID-and-Password

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

User-Access-Level-Selection

*Output Flows:*

Access-to-All-Forms

Access-to-All-Forms-within-School

Access-to-Own-Department-Forms

Administrator-Access

---

### **College Administrator Source/Sink**

*Description:*

Makes changes to administrative policies in areas not included in the schools.

*Input Flows:*

Administrator-Access

*Output Flows:*

Admin-ID-and-Password

---

### **Dean-ID-and-Password Data Flow**

*Description:*

The Assistant Dean submits a user ID and password to the system for authentication

*Source:* Assistant Dean (Source/Sink)

*Dest:* Login Authentication (Process)

---

### **Department Head Source/Sink**

*Description:*

Makes changes to the particular scholastic department

*Input Flows:*

Access-to-Own-Department-Forms

*Output Flows:*

Department-Head-ID-and-Password

---

### **Department-Head-ID-and-Password Data Flow**

*Description:*

Department Head's ID and Password are sent to be authenticated

*Source:* Department Head (Source/Sink)

*Dest:* Login Authentication (Process)

---

### **Login Authentication Process**

*Description:*

Takes user ID and password and verifies user authority to access the catalog database

*Input Flows:*

AA-ID-and-Password

Dean-ID-and-Password

Department-Head-ID-and-Password

Admin-ID-and-Password

*Output Flows:*

User-Access-Level-Selection

---

### **User-Access-Level-Selection Data Flow**

*Description:*

Access level requested from database

*Source:* Login Authentication (Process)

*Dest:* Catalog DB (File)

---

## ***Location – Change Data:***

### **Academic Affairs Source/Sink**

*Description:*

In actuality, signifies the head user/system administrator (i.e. Ms. Zimmerman), who has complete control

*Input Flows:*

Changes

*Output Flows:*

All-Final-Changes

---

### **All-Approved-Department-Changes Data Flow**

*Description:*

Assistant Dean submits changes for their particular school.

*Source:* Assistant Dean (Source/Sink)

*Dest:* Submits For Academic Affairs Approval (Process)

---

### **All-Final-Changes Data Flow**

*Description:*

All changes to any part of the catalog are submitted to the catalog database to update the records.

*Source:* Academic Affairs (Source/Sink)

*Dest:* Catalog DB (File)

---

### **Assistant Dean Source/Sink**

*Description:*

Anyone at the Dean level of the college; has the ability to access the database, make changes, and monitor

*Input Flows:*

Department-Changes

*Output Flows:*

All-Approved-Department-Changes

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

All-Final-Changes

---

### **Changes Data Flow**

*Description:*

All changes from all departments, schools, and offices of the college are submitted for Academic Affairs a

*Source:* Submits For Academic Affairs Approval (Process)

*Dest:* Academic Affairs (Source/Sink)

---

### **College Administrator Source/Sink**

*Description:*

Makes changes to administrative policies in areas not included in the schools.

*Output Flows:*

Pertinent-Administrative-Policy

---

### **Course-Info-Check Data Flow**

*Description:*

Verifies that the course information in Banner is correct.

*Source:* Department Head (Source/Sink)

*Dest:* Submit For Dean Approval (Process)

---

### **Department Head Source/Sink**

*Description:*

Makes changes to the particular scholastic department

*Output Flows:*

Faculty-Info-Check

Department-Info-Changes

Course-Info-Check

---

### **Department-Changes Data Flow**

*Description:*

Department heads make changes to only their specific department.

*Source:* Submit For Dean Approval (Process)

*Dest:* Assistant Dean (Source/Sink)

---

### **Department-Info-Changes Data Flow**

*Description:*

Submit any changes to the department information.

*Source:* Department Head (Source/Sink)

*Dest:* Submit For Dean Approval (Process)

---

### **Faculty-Info-Check Data Flow**

*Description:*

Verifies that the faculty information in Banner is correct.

*Source:* Department Head (Source/Sink)

*Dest:* Submit For Dean Approval (Process)

---

### **Pertinent-Administrative-Policy Data Flow**

*Description:*

Submit any college policy changes.

*Source:* College Administrator (Source/Sink)

*Dest:* Submits For Academic Affairs Approval (Process)

---

### **Submit For Dean Approval Process**

*Description:*

Process to send approval request to user at Dean Level

*Input Flows:*

Faculty-Info-Check

Department-Info-Changes

Course-Info-Check

*Output Flows:*

Department-Changes

---

### **Submits For Academic Affairs Approval Process**

*Description:*

Submit request for final approval on all changes from Academic Affairs

*Input Flows:*

All-Approved-Department-Changes

Pertinent-Administrative-Policy

*Output Flows:*

Changes

---

## ***Location – Level 1 Diagram – Manage Data:***

### **Academic Affairs Source/Sink**

*Description:*

In actuality, signifies the head user/system administrator (i.e. Ms. Zimmerman), who has complete control

*Output Flows:*

Database-Composition-Prompt

---

### **Banner File**

*Description:*

Data store; Database used by Siena College that contains course information and faculty listings; software

*Input Flows:*

Banner-Information-Request

*Output Flows:*

Faculty-Info

Course-Info

---

### **Banner Import Process**

*Description:*

Process to format Banner information from Banner tables and append them to the Catalog DB tables

*Input Flows:*

Database-Composition-Prompt

Faculty-Info

Course-Info

*Output Flows:*

Banner-Information-Request

Banner-Info

---

### **Banner-Info Data Flow**

*Description:*

Updated Banner information submitted to catalog database for storage.

*Source:* Banner Import (Process)

*Dest:* Catalog DB (File)

---

### **Banner-Information-Request Data Flow**

*Description:*

Banner requested to update faculty and course information, to prepare for submission to the catalog database

*Source:* Banner Import (Process)

*Dest:* Banner (File)

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

Banner-Info

Catalog-DB-Information-Request

*Output Flows:*

Catalog-DB-Information-Return

---

### **Catalog-DB-Information-Request Data Flow**

*Description:*

User requests information from the database.

*Source:* Query Handler (Process)

*Dest:* Catalog DB (File)

---

### **Catalog-DB-Information-Return Data Flow**

*Description:*

Catalog database returns the information requested in the catalog-DB-information-query.

*Source:* Catalog DB (File)

*Dest:* Query Handler (Process)

---



### **Course-Info Data Flow**

*Description:*

Contains information about courses.

*Source:* Banner (File)

*Dest:* Banner Import (Process)

---

### **Database-Composition-Prompt Data Flow**

*Description:*

Query to prompt for updated faculty and course information from Banner

*Source:* Academic Affairs (Source/Sink)

*Dest:* Banner Import (Process)

---

### **Faculty-Info Data Flow**

*Description:*

Contains faculty information to be added to the database from Banner.

*Source:* Banner (File)

*Dest:* Banner Import (Process)

---

### **Query Handler Process**

*Description:*

Allows user to request information from the Catalog DB and sends information back to said user

*Input Flows:*

Catalog-DB-Information-Return

*Output Flows:*

Catalog-DB-Information-Request

---

## ***Location – Query Handler:***

### **All Users Source/Sink**

*Description:*

Any user with the ability to make changes to the catalog

*Input Flows:*

Query-Results

*Output Flows:*

Query-Submission

Updated-Query

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Input Flows:*

Database-Information

*Output Flows:*

Data

---

### **Data Data Flow**

*Description:*

Contains any data coming from the College Catalog DB.

*Source:* Catalog DB (File)

*Dest:* Format Results (Process)

---

### **Database-Information Data Flow**

*Description:*

All database information submitted for the catalog.

*Source:* Query (Process)

*Dest:* Catalog DB (File)

---

### **Format Results Process**

*Description:*

Format queried results into aesthetically pleasing, easy to read text and possibly graphics

*Input Flows:*

Data

*Output Flows:*

Query-Results

---

### **Query Process**

*Description:*

Request information from Catalog DB

*Input Flows:*

Query-Submission

Updated-Query

*Output Flows:*

Database-Information

---

### **Query-Results Data Flow**

*Description:*

Formatted data returned to any user.

*Source:* Format Results (Process)

*Dest:* All Users (Source/Sink)

---

### **Query-Submission Data Flow**

*Description:*

Submit new information to the catalog

*Source:* All Users (Source/Sink)

*Dest:* Query (Process)

---

### **Updated-Query Data Flow**

*Description:*

Update information that already exists in the catalog.

*Source:* All Users (Source/Sink)

*Dest:* Query (Process)

---

### ***Location – Format Results:***

#### **All Users Source/Sink**

*Description:*

Any user with the ability to make changes to the catalog

*Input Flows:*

Query-Results

---

### **Catalog DB File**

*Description:*

Database containing all the College catalog information (different from Banner catalog database)

*Output Flows:*

Data

---

### **Convert to HTML Format Process**

*Description:*

Converts parsed text to an HTML format so that it is viewable to the users.

*Input Flows:*

Parsed-Text

*Output Flows:*

Query-Results

---

### **Convert to Parsed Text Process**

*Description:*

Converts any raw data to parsed text.

*Input Flows:*

Data

*Output Flows:*

Parsed-Text

---

### **Data Data Flow**

*Description:*

Contains any data coming from the College Catalog DB.

*Source:* Catalog DB (File)

*Dest:* Convert to Parsed Text (Process)

---

### **Parsed-Text Data Flow**

*Description:*

Parsed Text.

*Source:* Convert to Parsed Text (Process)

*Dest:* Convert to HTML Format (Process)

---

### **Query-Results Data Flow**

*Description:*

Formatted data returned to any user.

*Source:* Convert to HTML Format (Process)

*Dest:* All Users (Source/Sink)

---

## 1.5: Logical Data Stores

After consulting with our clients, Ms. Zimmerman and Mr. Smith, our group, in collaboration with IniTech software engineering group, compiled a list of all sections and subsections of the college catalog (as it was prepared for the 2004-2005 academic year). Along with this information, we indicated who would be editing this information, and the chain of command in which any given section will be edited and/or approved.

The following is that compiled list:

### **Table of Contents:**

Source: Text file  
College VP Area: Vice President of Academic Affairs  
Editor: Kate Zimmerman (or appointee)  
Hierarchy: None

### **Communications Directory:**

Source: Text file  
College VP Area: Vice President of Academic Affairs  
Editor: Kate Zimmerman (or appointee)  
Hierarchy: None

### **Academic Calendar:**

Source: Text file  
College VP Area: Vice President of Academic Affairs  
Editor: Kate Zimmerman (or appointee)  
Hierarchy: None

### **Siena College:**

Source: Text file

### *General Information*

College VP Area: President of the College  
Editor: Fr. Kevin Mackin, O.F.M. (or appointee)  
Hierarchy: President → Kate Zimmerman

### *Founding of the College*

College VP Area: President of the College  
Editor: Fr. Kevin Mackin, O.F.M. (or appointee)  
Hierarchy: President → Kate Zimmerman

### *The Franciscan Liberal Arts Tradition*

College VP Area: President of the College  
Editor: Fr. Kevin Mackin, O.F.M. (or appointee)  
Hierarchy: President → Kate Zimmerman

### *Mission Statement*

College VP Area: President of the College  
Editor: Fr. Kevin Mackin, O.F.M. (or appointee)  
Hierarchy: President → Kate Zimmerman

### *Accreditation*

College VP Area: Vice President for Enrollment and Planning  
Editor: Noel Hogan (or appointee)  
Hierarchy: VPEP → Kate Zimmerman

### *Retention Rates*

College VP Area: Vice President for Enrollment and Planning  
Editor: Noel Hogan (or appointee)  
Hierarchy: VPEP → Kate Zimmerman

### *Growth of Campus Facilities*

College VP Area: Vice President, Office of the President  
Editor: Fr. James Toal, O.F.M. (or appointee)  
Hierarchy: VPOP → Kate Zimmerman

### *Library / Audiovisual Resources*

College VP Area: Vice President of Academic Affairs  
Editor: Linda Richardson (or appointee)  
Hierarchy: VPAA → Kate Zimmerman

### *Information & Technology Services*

College VP Area: Vice President of Finance & Administration  
Editor: Paul Stec (or appointee)  
Hierarchy: VPFA → Kate Zimmerman

### *Computer Ethics*

College VP Area: Vice President of Finance & Administration  
Editor: Paul Stec (or appointee)  
Hierarchy: VPFA → Kate Zimmerman

### *Academic Integrity*

College VP Area: Vice President of Academic Affairs  
Editor: Linda Richardson (or appointee)  
Hierarchy: VPAA → Kate Zimmerman

### *Student Records -Family Education Rights &...*

College VP Area: Vice President of Academic Affairs  
Editor: Linda Richardson (or appointee)  
Hierarchy: VPAA → Kate Zimmerman

### *Student Access to Records*

College VP Area: Vice President of Academic Affairs  
Editor: Linda Richardson (or appointee)  
Hierarchy: VPAA → Kate Zimmerman

### *Siena College Health Requirements*

College VP Area: Vice President of Student Affairs  
Editor: Maryellen Gilroy (or appointee)  
Hierarchy: VPSA → Kate Zimmerman

*Campus Crime Statistics*

College VP Area: Vice President, Office of the President

Editor: Fr. James Toal, O.F.M. (or appointee)

Hierarchy: VPOP → Kate Zimmerman

*Compliance Statements*

College VP Area: Vice President of Finance & Administration

Editor: Paul Stec (or appointee)

Hierarchy: VPFA → Kate Zimmerman

*Changes in College Regulations*

College VP Area: Vice President of Finance & Administration

Editor: Paul Stec (or appointee)

Hierarchy: VPFA → Kate Zimmerman

**Admission to the College:**

Source: Text file

College VP Area: Vice President of Enrollment & Planning

Editor: Noel Hogan (or appointee)

Hierarchy: VPEP → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*General Requirements*

*Interviews*

*High School Course Requirements*

*When & How to Apply*

*Early Admission*

*Early Decision*

*Early Action*

*Higher Education Opportunity Program*

*International Applicants*

*Transfer Students*

*Re-entry Students*

*Non-matriculated Students*

*Auditing Students*

*International Students*

*Advanced Placement*

*International Baccalaureate*

**Undergraduate Tuition & Fees:**

Source: Text file

College VP Area: Vice President of Finance & Administration

Editor: Paul Stec (or appointee)

Hierarchy: VPFA → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*General Info*  
*Procedure for Payment*  
*Payment by Check*  
*Deposit*  
*Rooms & Meals*  
*Books & Supplies*  
*General Estimate of Cost*  
*Withdrawals & Refunds*  
*Room & Board Fees*

**Academic Info & Regulations:**

Source: Text file  
College VP Area: Vice President of Academic Affairs  
Editor: Linda Richardson (or appointee)  
Hierarchy: VPAA → Kate Zimmerman

**Degree Requirements:**

Source: Text file  
College VP Area: Vice President of Academic Affairs  
Editor: Linda Richardson (or appointee)  
Hierarchy: VPAA → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*General Info*  
*Core, Concentration, & Electives*  
*Core Curriculum*  
*Major*  
*Changing Schools*  
*Change of Major*  
*Minor*  
*Double Majors*  
*Double Degrees - Simultaneous Awarding...*  
*Second Degree*  
*Transfer Credit for Matriculated Siena Student*  
*Graduation*  
*Academic Advising*  
*Registration*  
*Regular & Summer Sessions*  
*Day & Evening Sessions*

*Unit of Instruction*  
*Absences from Class*  
*Change of Address*  
*Pass/Fail Option*  
*Adding a Course*  
*Dropping a Course*  
*Examinations*  
*College Proficiency Examinations, Noncoll...*  
*Academic Classification*  
*System of Grading*  
*Grade Reports*  
*Appeal of Assigned Grades*  
*Scholarship Indices (G.P.A)*  
*Repeated Courses*  
*Transcript of Record*  
*Honor Lists*  
*Honor Society*  
*Graduation Honors*  
*Good Academic Standing*  
*Academic Probation & Academic Dismissal*  
*Withdrawing from the College*  
*Separation from the College*  
*Snow Day Procedure*  
*Faculty Attendance Policies*

**Courses of Instruction:**

*Attributes List*

Source: Banner

College VP Area: Vice President of Academic Affairs

Editor: Linda Richardson (or appointee)

Hierarchy: VPAA → Kate Zimmerman

**Multidisciplinary Courses, Certificates, etc.:**

College VP Area: Vice President of Academic Affairs

Editor: Program Director

Hierarchy: Program Director → Kate Zimmerman

**Convivium**

*General Info*

Source: Text file

*Course Desc*

Source: Banner



## **Criminal Justice Minor Environmental Studies Certificate Program**

### *General Info*

Source: Text file

## **Foundations Sequence**

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

## **Franciscan Service & Advocacy Minor**

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

### *Course Desc*

Source: Banner

## **Globalization Studies Minor**

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

### *Course Desc*

Source: Banner

## **Health Care Minors**

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

## **Honors Program**

### *General Info*

Source: Text file

## **International Studies:**

College VP Area: Vice President of Academic Affairs

Editor: Program Director

Hierarchy: Program Director → Kate Zimmerman

## **Foreign Language & Business Cert Program**

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

## **Multicultural Studies Minor**

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

### *Course Desc*

Source: Banner

## **Peace Studies Certificate Program**

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Women's Studies Minor**

### *General Info*

Source: Text file

### *Course List/Requirements*

Source: Banner

### *Course Desc*

Source: Banner

## **School of Liberal Arts:**

College VP Area: Vice President of Academic Affairs

Hierarchy: Department Head/Program Director → Assistant Dean → Kate Zimmerman

### *Professors*

Source: Text file

Editor: Assistant Dean (or appointee)

### *Course Desc*

Source: Banner

Editor: Assistant Dean (or appointee)

## **American Studies Program**

Editor: Program Director (or appointee)

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Creative Arts**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Theatre Program**

Editor: Program Director (or appointee)

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Education Dept**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

**English Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**English Honors Program**

Editor: Program Director (or appointee)

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**History Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**History Honors Program**

Editor: Program Director (or appointee)

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

## **Modern Language & Classics Dept**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **American Sign Language**

### *Course Desc*

Source: Banner

## **French**

### *Course Desc*

Source: Banner

## **German**

### *Course Desc*

Source: Banner

## **Russian**

### *Course Desc*

Source: Banner

## **Spanish**

### *Course Desc*

Source: Banner

## **Classics – Latin**

### *Course Desc*

Source: Banner

## **Greek**

### *Course Desc*

Source: Banner

## **Greek Classical Studies**

### *Course Desc*

Source: Banner

**Philosophy Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Political Science Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Psychology Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Religious Studies Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

## **Social Work Dept**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Sociology Dept**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **School of Business:**

College VP Area: Vice President of Academic Affairs

Hierarchy: Department Head/Program Director → Assistant Dean → Kate Zimmerman

## **Accounting and Business Law**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Business Law**

### *Course Desc*

Source: Banner

**Economics Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Finance Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Marketing Management Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Quantitative Business Analysis Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**School of Science:**

College VP Area: Vice President of Academic Affairs

Hierarchy: Department Head/Program Director → Assistant Dean → Kate Zimmerman



**Biology Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Chemistry Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Computer Science Dept**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

**Environmental Studies Program**

Editor: Department Head

*Professors*

Source: Text file

*General Info*

Source: Text file

*Course Desc*

Source: Banner

## **Mathematics Dept**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Physics Dept**

Editor: Department Head

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Military Science Department:**

College VP Area: Vice President of Academic Affairs

Editor: Department Head

Hierarchy: Department Head → Kate Zimmerman

### *Professors*

Source: Text file

### *General Info*

Source: Text file

### *Course Desc*

Source: Banner

## **Off Campus Opportunities:**

Source: Text file

College VP Area: Vice President of Academic Affairs

Editor: Program Director

Hierarchy: Program Director → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*Internships General Info*

*Study Abroad General Info*

*Washington Semester General Info*

**Pre-Professional Studies:**

Source: Text file

College VP Area: Vice President of Academic Affairs

Editor: Program Director(s)

Hierarchy: Program Director(s) → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*Pre-Law Studies General Info*

*Pre-Medical, Pre-Dental and other Health-Related Studies General Info*

*Allied Health Professions General Info*

**Affiliation/Articulation Agreements:**

Source: Text file

College VP Area: Vice President of Academic Affairs

Editor: Program Director(s)

Hierarchy: Program Director → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*2- Year Institutions General Info*

*Albany Medical Early Assurance General Info*

*Albany Medical Program in Science, Humanities and Medicine General Info*

*Boston University Goldman School of Graduate Dentistry General Info*

*Business Management Programs General Info*

*Engineering Programs General Info*

*Environmental Science/ Forestry Program General Info*

*Hudson-Mohawk Association General Info*

*Law School Programs General Info*

*Pennsylvania College of Optometry Program General Info*

*Social Work Masters Program General Info*

*SUNY Buffalo School of Dental Medicine Program General Info*

*SUNY College of Optometry Early Assurance Program General Info*

*SUNY College of Optometry Joint Affiliation Program General Info SUNY*

*College of Medicine Early Assurance General Info*

*Temple University College of Podiatric Medicine Program General Info*

**Special Programs:**

Source: Text file

College VP Area: Vice President, Office of the President

Editor: Fr. James Toal, O.F.M. (or appointee)

Hierarchy: VPOP → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*Kieval Institute for Jewish Christian Studies General Info*  
*MLK Jr. and Coretta Scott King Lecture Series on Race and Nonviolent Social Change General Info*  
*Reinhold Niebuhr Institute of Religion and Culture General Info*  
*Siena Business Institute General Info*  
*Siena Research Institute General Info*

### **The Siena Community:**

Source: Text file

College VP Area: Vice President, Office of the President

Editor: Maryellen Gilroy (or appointee)

Hierarchy: VPSA → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*Office of College Chaplain General Info*  
*Franciscan Center for Service and Advocacy General Info*  
*Student Life General Info*  
*Student Government General Info*  
*Student Activities General Info*  
*Weekend Activities General Info*  
*Dramatics General Info*  
*Music General Info*  
*Athletics Program General Info*  
*Concerts General Info*  
*Guest Lecturers General Info*  
*Residence Life General Info*  
*Motor Vehicle Registration and Traffic Violations General Info*  
*Dining General Info*  
*Student Services Orientation General Info*  
*Commuter Students General Info*  
*Sarazen Student Union General Info*  
*Multicultural Affairs General Info*  
*Counseling Center General Info*  
*The Writing Center General Info*  
*Office of Tutoring and Services for Students with Disabilities General Info*  
*Learning Support Services General Info*  
*Health Services General Info*

**Career Services:***General Info*

Source: Text document

College VP Area: Vice President of Academic Affairs

Editor: Thomas Denham, Director of the Career Center (or appointee)

Hierarchy: Director of Career Center → Kate Zimmerman

**Financial Aid:**

Source: Text file

College VP Area: Vice President for Enrollment Planning

Editor: Noel Hogan (or appointee)

Hierarchy: VPEP → Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*General Info*

*Grants and Scholarships General Info*

*State and Federal Aid Programs General Info*

*Criteria for Renewal of Financial Aid General Info*

*Satisfactory Academic Progress General Info*

*Federal Aid General Info*

*NYS Aid General Info*

*Appealing the Withdrawal of Aid General Info*

*State and Federal Aid Programs Descriptions*

**Directory:**

Source: Banner

Hierarchy: Kate Zimmerman

Subsections: All subsections have the same source, College VP area, editor, and hierarchy.

The following are the subsections for this section:

*Board of Trustees*

*Office of the President*

*Office of the Vice President*

*Athletic Department*

*Office of the College Chaplain*

*Plant Operations*

*Safety and Security*

*Office of VP for Academic Affairs*

*School Officers*

*Career Center*

*HEOP*

*Library/Audio Visual Services*  
*Center for Continuing and Professional Education*  
*Office of International Programs*  
*Office of the Registrar*  
*Office of Tutoring and Services for Students with Disabilities*  
*Writing Center*  
*Office of the VP for Community and Public Affairs*  
*Siena Research Institute*  
*WVCR*  
*Office of VP for Enrollment and Planning*  
*Office of Admissions*  
*Office of Financial Aid*  
*Communications*  
*Office of Enrollment and Planning*  
*Office of the VP for Finance and Administration*  
*Business Affairs*  
*Human Resources*  
*Information & Technology Services*  
*Post Office*  
*Purchasing*  
*Office of VP for Institutional Advancement*  
*Alumni Relations*  
*Annual Fund*  
*Office of the VP for Student Affairs*  
*Counseling Center*  
*Franciscan Center for Service and Advocacy*  
*Health Services*  
*Residence Life*  
*Campus Programs*  
*Multicultural Affairs*  
*Full-Time Faculty*  
*Part-Time Faculty*  
*Professors Emeriti*  
*Vice President Emeritus*  
*Registrar Emeriti*

The final subsection does not follow the same format, and is as follows:

*Committees of the College*

Source: Text file

College VP Area: Vice President of Academic Affairs

Editor: Kate Zimmerman

Hierarchy: None

**Index:**

Source: Text File  
Editor: Publisher  
Hierarchy: Publisher → Kate Zimmerman

**Directions to the College:**

Source: Text document  
College VP Area: Vice President, Office of the President  
Editor: Fr. James Toal, O.F.M. (or appointee)  
Hierarchy: VPOP → Kate Zimmerman

Additionally, our group, in a collaborative effort with IniTech, we met with Jim Serbalik, Director of the Registrar, and Stephanie Kot, a staff member in Information & Technology Services (I&TS). Mr. Serbalik and Ms. Kot informed us of the forms and the tables (associated with the forms) that we would need access to from Banner to gather information for our database.

The following are a list of the tables and fields necessary for our database, organized by the forms we would need access to from Banner:

**Form: SCARRES (owned by Registrar)***Table: SCRRCOL*

Fields: SCRRCOL\_SUBJ\_CODE  
SCRRCOL\_CRSE\_NUMB  
SCRRCOL\_EFF\_TERM  
SCRRCOL\_REC\_TYPE  
SCRRCOL\_COLL\_IND  
SCRRCOL\_COLL\_CODE  
SCRRCOL\_ACTIVITY\_DATE

*Table: SCRRMAJ*

Fields: SCRRMAJ\_SUBJ\_CODE  
SCRRMAJ\_CRSE\_NUMB  
SCRRMAJ\_EFF\_TERM  
SCRRMAJ\_REC\_TYPE  
SCRRMAJ\_MAJOR\_IND  
SCRRMAJ\_MAJR\_CODE  
SCRRMAJ\_ACTIVITY\_DATE

*Table: SCRRCLS*

Fields: SCRRCLS\_SUBJ\_CODE  
SCRRCLS\_CRSE\_NUMB  
SCRRCLS\_EFF\_TERM  
SCRRCLS\_REC\_TYPE  
SCRRCLS\_CLASS\_IND  
SCRRCLS\_CLAS\_CODE  
SCRRCLS\_ACTIVITY\_DATE

*Table: SCRRLVL*

Fields: SCRRLVL\_SUBJ\_CODE  
SCRRLVL\_CRSE\_NUMB  
SCRRLVL\_EFF\_TERM  
SCRRLVL\_REC\_TYPE  
SCRRLVL\_LEVEL\_IND  
SCRRLVL\_LEVEL\_CODE  
SCRRLVL\_ACTIVITY\_DATE

*Table: SCRRDEG*

Fields: SCRRDEG\_SUBJ\_CODE  
SCRRDEG\_CRSE\_NUMB  
SCRRDEG\_TERM\_CODE\_EFFECTIVE  
SCRRDEG\_REC\_TYPE  
SCRRDEG\_ACTIVITY\_DATE  
SCRRDEG\_DEGC\_IND  
SCRRDEG\_DEGC\_CODE

*Table: SCRRPRG*

Fields: SCRRPRG\_SUBJ\_CODE  
SCRRPRG\_CRSE\_NUMB  
SCRRPRG\_TERM\_CODE\_EFFECTIVE  
SCRRPRG\_REC\_TYPE  
SCRRPRG\_ACTIVITY\_DATE  
SCRRPRG\_PROGRAM\_IND  
SCRRPRG\_PROGRAM

*Table: SCRRCAM*

Fields: SCRRCAM\_SUBJ\_CODE  
SCRRCAM\_CRSE\_NUMB  
SCRRCAM\_EFF\_TERM  
SCRRCAM\_REC\_TYPE  
SCRRCAM\_CAMP\_IND  
SCRRCAM\_CAMP\_CODE  
SCRRCAM\_ACTIVITY\_DATE



**Form: SCABASE (owned by Registrar)**

*Table: SCBCRKY*

Fields: SCBCRKY\_SUBJ\_CODE  
SCBCRKY\_CRSE\_NUMB  
SCBCRKY\_TERM\_CODE\_START  
SCBCRKY\_TERM\_CODE\_END  
SCBCRKY\_ACTIVITY\_DATE

**Form: SCADETL (owned by Registrar)**

*Table: SCREQIV*

Fields: SCREQIV\_SUBJ\_CODE  
SCREQIV\_CRSE\_NUMB  
SCREQIV\_EFF\_TERM  
SCREQIV\_SUBJ\_CODE\_EQIV  
SCREQIV\_CRSE\_NUMB\_EQIV  
SCREQIV\_START\_TERM  
SCREQIV\_END\_TERM  
SCREQIV\_ACTIVITY\_DATE

*Table: SCRFEEES*

Fields: SCRFEEES\_SUBJ\_CODE  
SCRFEEES\_CRSE\_NUMB  
SCRFEEES\_EFF\_TERM  
SCRFEEES\_DETL\_CODE  
SCRFEEES\_FEE\_IND  
SCRFEEES\_FEE\_IND\_IND  
SCRFEEES\_FEE\_AMOUNT  
SCRFEEES\_ACTIVITY\_DATE  
SCRFEEES\_FTyp\_CODE

*Table: SCRATTR*

Fields: SCRATTR\_SUBJ\_CODE  
SCRATTR\_CRSE\_NUMB  
SCRATTR\_EFF\_TERM  
SCRATTR\_ATTR\_CODE  
SCRATTR\_ACTIVITY\_DATE

*Table: SCBSUPP*

Fields: SCBSUPP\_SUBJ\_CODE  
SCBSUPP\_CRSE\_NUMB  
SCBSUPP\_EFF\_TERM  
SCBSUPP\_TOPS\_CODE  
SCBSUPP\_OCCS\_CODE  
SCBSUPP\_CCSL\_CODE  
SCBSUPP\_COOP\_ED\_IND  
SCBSUPP\_ACTIVITY\_DATE  
SCBSUPP\_PERM\_DIST\_IND  
SCBSUPP\_CUDA\_CODE  
SCBSUPP\_CUDB\_CODE  
SCBSUPP\_CUDC\_CODE  
SCBSUPP\_CUDD\_CODE  
SCBSUPP\_CUDE\_CODE  
SCBSUPP\_CUDF\_CODE  
SCBSUPP\_CREDIT\_CATEGORY\_IND

*Table: SCBDESC*

Fields: SCBDESC\_SUBJ\_CODE  
SCBDESC\_CRSE\_NUMB  
SCBDESC\_TERM\_CODE\_EFF  
SCBDESC\_ACTIVITY\_DATE  
SCBDESC\_USER\_ID  
SCBDESC\_TEXT\_NARRATIVE  
SCBDESC\_TERM\_CODE\_END

*Table: SCRTEXT*

Fields: SCRTEXT\_SUBJ\_CODE  
SCRTEXT\_CRSE\_NUMB  
SCRTEXT\_EFF\_TERM  
SCRTEXT\_TEXT\_CODE  
SCRTEXT\_SEQNO  
SCRTEXT\_TEXT  
SCRTEXT\_ACTIVITY\_DATE

*Table: SRCORQ*

Fields: SRCORQ\_SUBJ\_CODE  
SRCORQ\_CRSE\_NUMB  
SRCORQ\_EFF\_TERM  
SRCORQ\_SUBJ\_CODE\_CORQ  
SRCORQ\_CRSE\_NUMB\_CORQ  
SRCORQ\_ACTIVITY\_DATE

*Table: SCRSBGI*

Fields: SCRSBGI\_SUBJ\_CODE  
SCRSBGI\_CRSE\_NUMB  
SCRSBGI\_EFF\_TERM  
SCRSBGI\_SBG\_CODE  
SCRSBGI\_AGREEMENT\_DATE  
SCRSBGI\_ACTIVITY\_DATE

**Form: SCACRSE (owned by Registrar)**

*Table: SCRLEVEL*

Fields: SCRLEVEL\_SUBJ\_CODE  
SCRLEVEL\_CRSE\_NUMB  
SCRLEVEL\_EFF\_TERM  
SCRLEVEL\_LEVEL\_CODE  
SCRLEVEL\_ACTIVITY\_DATE

*Table: SCRGMOD*

Fields: SCRGMOD\_SUBJ\_CODE  
SCRGMOD\_CRSE\_NUMB  
SCRGMOD\_EFF\_TERM  
SCRGMOD\_GMOD\_CODE  
SCRGMOD\_ACTIVITY\_DATE  
SCRGMOD\_DEFAULT\_IND

*Table: SCRSCHD*

Fields: SCRSCHD\_SUBJ\_CODE  
SCRSCHD\_CRSE\_NUMB  
SCRSCHD\_EFF\_TERM  
SCRSCHD\_SCHD\_CODE  
SCRSCHD\_ACTIVITY\_DATE  
SCRSCHD\_WORKLOAD  
SCRSCHD\_MAX\_ENRL  
SCRSCHD\_ADJ\_WORKLOAD  
SCRSCHD\_INSM\_CODE

*Table: SCRCPRT*

Fields: SCRCPRT\_SUBJ\_CODE  
SCRCPRT\_CRSE\_NUMB  
SCRCPRT\_TERM\_CODE\_EFF  
SCRCPRT\_ACTIVITY\_DATE  
SCRCPRT\_USER\_ID  
SCRCPRT\_PARS\_CODE  
SCRCPRT\_PARS\_PREF\_NUMBER

*Table: SCRCRDF*

Fields: SCRCRDF\_SUBJ\_CODE  
SCRCRDF\_CRSE\_NUMB  
SCRCRDF\_TERM\_CODE\_EFF  
SCRCRDF\_ACTIVITY\_DATE  
SCRCRDF\_USER\_ID  
SCRCRDF\_RDEF\_CODE  
SCRCRDF\_RDEF\_PREF\_NUMBER

*Table: SCBCRSE*

Fields: SCBCRSE\_SUBJ\_CODE  
SCBCRSE\_CRSE\_NUMB  
SCBCRSE\_EFF\_TERM  
SCBCRSE\_COLL\_CODE  
SCBCRSE\_DIVS\_CODE  
SCBCRSE\_DEPT\_CODE  
SCBCRSE\_CSTA\_CODE  
SCBCRSE\_TITLE  
SCBCRSE\_CIPC\_CODE  
SCBCRSE\_CREDIT\_HR\_IND  
SCBCRSE\_CREDIT\_HR\_LOW  
SCBCRSE\_CREDIT\_HR\_HIGH  
SCBCRSE\_LEC\_HR\_IND  
SCBCRSE\_LEC\_HR\_LOW  
SCBCRSE\_LEC\_HR\_HIGH  
SCBCRSE\_LAB\_HR\_IND  
SCBCRSE\_LAB\_HR\_LOW  
SCBCRSE\_LAB\_HR\_HIGH  
SCBCRSE\_OTH\_HR\_IND  
SCBCRSE\_OTH\_HR\_LOW  
SCBCRSE\_OTH\_HR\_HIGH  
SCBCRSE\_BILL\_HR\_IND  
SCBCRSE\_BILL\_HR\_LOW  
SCBCRSE\_BILL\_HR\_HIGH  
SCBCRSE\_APRV\_CODE  
SCBCRSE\_REPEAT\_LIMIT  
SCBCRSE\_PWAV\_CODE  
SCBCRSE\_TUIW\_IND  
SCBCRSE\_ADD\_FEES\_IND  
SCBCRSE\_ACTIVITY\_DATE  
SCBCRSE\_CONT\_HR\_LOW  
SCBCRSE\_CONT\_HR\_HIGH  
SCBCRSE\_CONT\_HR\_IND  
SCBCRSE\_CEU\_IND  
SCBCRSE\_REPS\_CODE  
SCBCRSE\_MAX\_RPT\_UNITS  
SCBCRSE\_CAPP\_PREREQ\_TEST\_IND

SCBCRSE\_DUNT\_CODE  
SCBCRSE\_NUMBER\_OF\_UNITS

**Form: SCAPREQ (owned by Registrar)**

*Table: SCRRTST*

Fields: SCRRTST\_SUBJ\_CODE  
SCRRTST\_CRSE\_NUMB  
SCRRTST\_TERM\_CODE\_EFF  
SCRRTST\_SEQNO  
SCRRTST\_TESC\_CODE  
SCRRTST\_TEST\_SCORE  
SCRRTST\_SUBJ\_CODE\_PREQ  
SCRRTST\_CRSE\_NUMB\_PREQ  
SCRRTST\_LEVL\_CODE  
SCRRTST\_MIN\_GRDE  
SCRRTST\_CONCURRENCY\_IND  
SCRRTST\_CONNECTOR  
SCRRTST\_LPAREN  
SCRRTST\_RPAREN  
SCRRTST\_ACTIVITY\_DATE

*Table: SCRRARE*

Fields: SCRRARE\_SUBJ\_CODE  
SCRRARE\_CRSE\_NUMB  
SCRRARE\_TERM\_CODE\_EFFECTIVE  
SCRRARE\_ACTIVITY\_DATE  
SCRRARE\_SEQNO  
SCRRARE\_AREA

*Table: SCBCRSE*

Fields: SCBCRSE\_SUBJ\_CODE  
SCBCRSE\_CRSE\_NUMB  
SCBCRSE\_EFF\_TERM  
SCBCRSE\_COLL\_CODE  
SCBCRSE\_DIVS\_CODE  
SCBCRSE\_DEPT\_CODE  
SCBCRSE\_CSTA\_CODE  
SCBCRSE\_TITLE  
SCBCRSE\_CIPC\_CODE  
SCBCRSE\_CREDIT\_HR\_IND  
SCBCRSE\_CREDIT\_HR\_LOW  
SCBCRSE\_CREDIT\_HR\_HIGH  
SCBCRSE\_LEC\_HR\_IND  
SCBCRSE\_LEC\_HR\_LOW  
SCBCRSE\_LEC\_HR\_HIGH  
SCBCRSE\_LAB\_HR\_IND  
SCBCRSE\_LAB\_HR\_LOW  
SCBCRSE\_LAB\_HR\_HIGH

SCBCRSE\_OTH\_HR\_IND  
SCBCRSE\_OTH\_HR\_LOW  
SCBCRSE\_OTH\_HR\_HIGH  
SCBCRSE\_BILL\_HR\_IND  
SCBCRSE\_BILL\_HR\_LOW  
SCBCRSE\_BILL\_HR\_HIGH  
SCBCRSE\_APRV\_CODE  
SCBCRSE\_REPEAT\_LIMIT  
SCBCRSE\_PWAV\_CODE  
SCBCRSE\_TUIW\_IND  
SCBCRSE\_ADD\_FEES\_IND  
SCBCRSE\_ACTIVITY\_DATE  
SCBCRSE\_CONT\_HR\_LOW  
SCBCRSE\_CONT\_HR\_HIGH  
SCBCRSE\_CONT\_HR\_IND  
SCBCRSE\_CEU\_IND  
SCBCRSE\_REPS\_CODE  
SCBCRSE\_MAX\_RPT\_UNITS  
SCBCRSE\_CAPP\_PREREQ\_TEST\_IND  
SCBCRSE\_DUNT\_CODE  
SCBCRSE\_NUMBER\_OF\_UNITS

**Form: PPAIDEN (owned by Human Resources)**

*Table: SPRIDEN*

Fields: SPRIDEN\_PIDM  
SPRIDEN\_ID  
SPRIDEN\_LAST\_NAME  
SPRIDEN\_FIRST\_NAME  
SPRIDEN\_MI  
SPRIDEN\_CHANGE\_IND  
SPRIDEN\_ENTITY\_IND  
SPRIDEN\_ACTIVITY\_DATE  
SPRIDEN\_USER  
SPRIDEN\_ORIGIN  
SPRIDEN\_SEARCH\_LAST\_NAME  
SPRIDEN\_SEARCH\_FIRST\_NAME  
SPRIDEN\_SEARCH\_MI  
SPRIDEN\_SOUNDEX\_LAST\_NAME  
SPRIDEN\_SOUNDEX\_FIRST\_NAME  
SPRIDEN\_NTYP\_CODE  
SPRIDEN\_CREATE\_USER  
SPRIDEN\_CREATE\_DATE  
SPRIDEN\_DATA\_ORIGIN

*Table: PEBEMPL*

Fields: PEBEMPL\_PIDM  
PEBEMPL\_EMPL\_STATUS  
PEBEMPL\_COAS\_CODE\_HOME  
PEBEMPL\_ORGN\_CODE\_HOME  
PEBEMPL\_COA\_CODE\_DIST  
PEBEMPL\_ORGN\_CODE\_DIST  
PEBEMPL\_ECLS\_CODE  
PEBEMPL\_LCAT\_CODE  
PEBEMPL\_BCAT\_CODE  
PEBEMPL\_FIRST\_HIRE\_DATE  
PEBEMPL\_CURRENT\_HIRE\_DATE  
PEBEMPL\_ADJ\_SERVICE\_DATE  
PEBEMPL\_SENIORITY\_DATE  
PEBEMPL\_LREA\_CODE  
PEBEMPL\_LOA\_BEG\_DATE  
PEBEMPL\_LOA\_END\_DATE  
PEBEMPL\_TREA\_CODE  
PEBEMPL\_TERM\_DATE  
PEBEMPL\_I9\_FORM\_IND  
PEBEMPL\_I9\_DATE  
PEBEMPL\_I9\_EXPIRE\_DATE  
PEBEMPL\_ACTIVITY\_DATE  
PEBEMPL\_WKPR\_CODE  
PEBEMPL\_FLSA\_IND  
PEBEMPL\_STGR\_CODE  
PEBEMPL\_DAYS\_IN\_CANADA  
PEBEMPL\_1042\_RECIPIENT\_CD  
PEBEMPL\_INTERNAL\_FT\_PT\_IND  
PEBEMPL\_DICD\_CODE  
PEBEMPL\_EGRP\_CODE  
PEBEMPL\_IPEDS\_SOFT\_MONEY\_IND  
PEBEMPL\_FIRST\_WORK\_DATE  
PEBEMPL\_LAST\_WORK\_DATE  
PEBEMPL\_CALIF\_PENSION\_IND  
PEBEMPL\_NRSI\_CODE  
PEBEMPL\_SSN\_LAST\_NAME  
PEBEMPL\_SSN\_FIRST\_NAME  
PEBEMPL\_SSN\_MI  
PEBEMPL\_SSN\_SUFFIX  
PEBEMPL\_JBLN\_CODE  
PEBEMPL\_COLL\_CODE  
PEBEMPL\_CAMP\_CODE

In order to have a better understanding of how these tables apply to our system, we have provided a couple of examples of information we would need. One example provides information for a department (to keep our information consistent, specifically the Computer Science Department), and one example will provide material from Banner for the Directory information of the catalog.

If we needed to retrieve course information for the Computer Science Department, we would be looking for information that would affect the SCACRSE, SCAPREQ, and SCADETL database forms. From the SCBCRSE table, which affects the SCACRSE form, we would need information such as SCBCRSE\_CRSE\_NUMB, SCBCRSE\_TITLE, SCBCRSE\_CREDIT\_HR\_IND, SCBCRSE\_CREDIT\_HR\_LOW, SCBCRSE\_CREDIT\_HR\_HIGH, SCBCRSE\_LEC\_HR\_IND, SCBCRSE\_LEC\_HR\_LOW, SCBCRSE\_LEC\_HR\_HIGH, SCBCRSE\_LAB\_HR\_IND, SCBCRSE\_LAB\_HR\_LOW, SCBCRSE\_LAB\_HR\_HIGH, SCBCRSE\_OTH\_HR\_IND, SCBCRSE\_OTH\_HR\_LOW, SCBCRSE\_OTH\_HR\_HIGH, SCBCRSE\_BILL\_HR\_IND, SCBCRSE\_BILL\_HR\_LOW, SCBCRSE\_BILL\_HR\_HIGH, SCBCRSE\_REPEAT\_LIMIT, SCBCRSE\_CAPP\_PREREQ\_TEST\_IND.

If we needed to retrieve course information for the Directory, we would be looking for listings of faculty, staff, administrators, and Board of Trustee members, to name a few. Therefore, we would need information from tables that affect the PPAIDEN forms. From the SPRIDEN table, we would need the following fields: SPRIDEN\_LAST\_NAME, SPRIDEN\_FIRST\_NAME, SPRIDEN\_MI, SPRIDEN\_CHANGE\_IND, SPRIDEN\_ENTITY\_IND, SPRIDEN\_USER, SPRIDEN\_ORIGIN, SPRIDEN\_DATA\_ORIGIN.

It is possible that we will need more information from these tables than what we have listed, as we have not actually seen the tables and may need more fields provided within them upon actually seeing what is stored inside those fields.

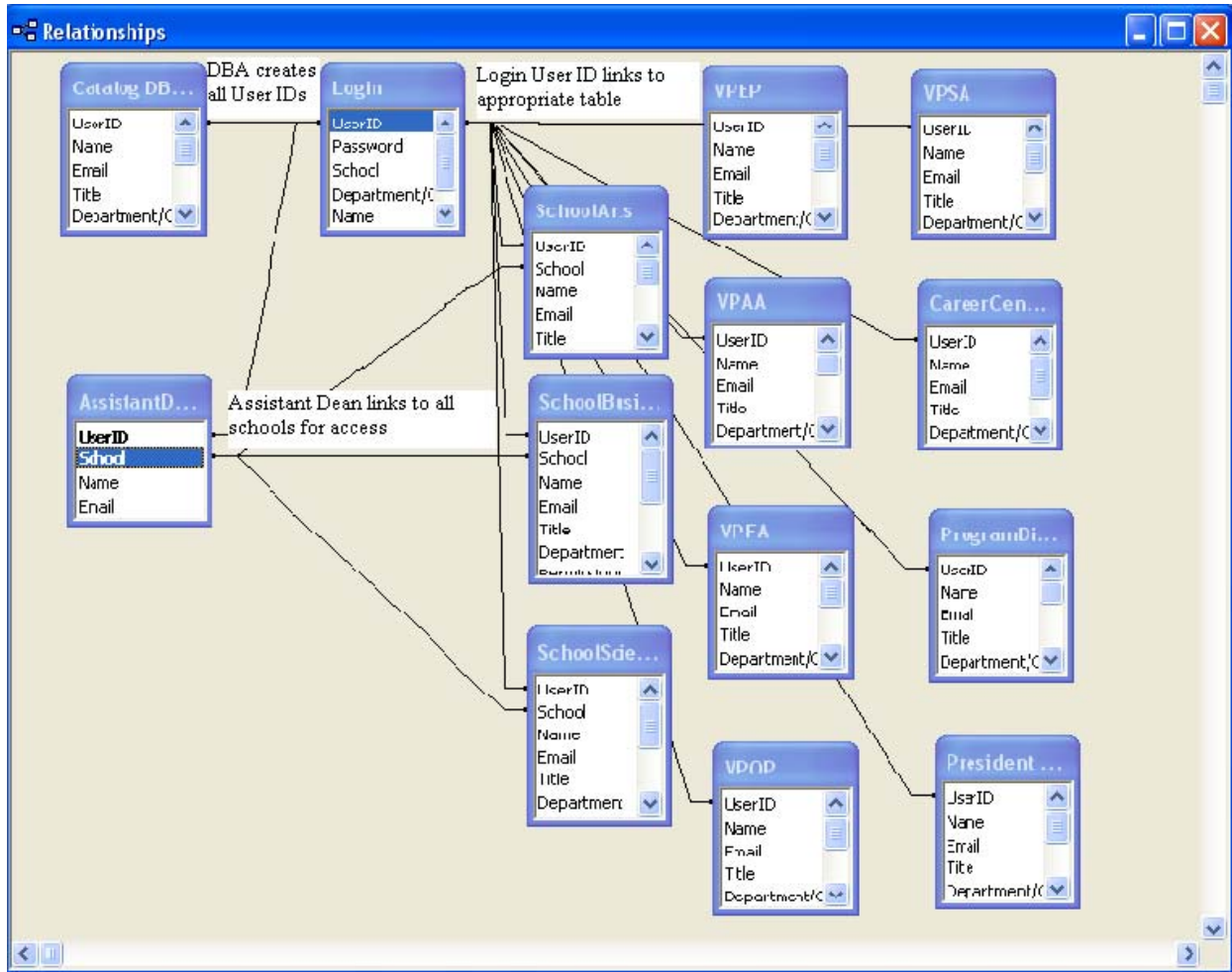


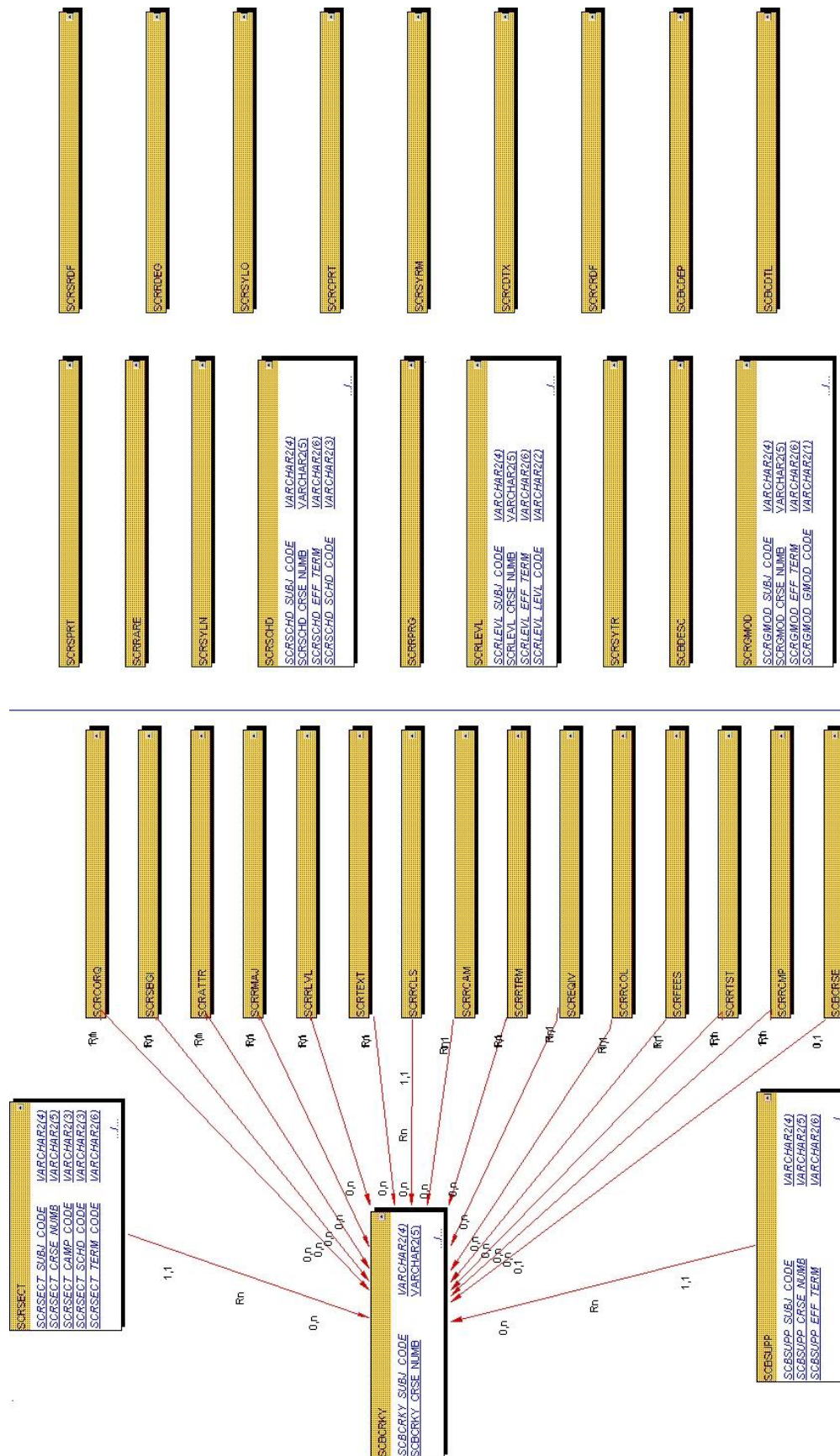
## **1.6: Logical Format of Data Files and Databases**

The information used to develop our catalog will be stored in a database system. As we have determined from information from our clients, the data needed to create the college catalog are typically text documents, since text files are what is sent to the catalog publisher. Also, text files allows for easier editing for any users. Therefore, our database will have tables that will store our information in text files.

As we have stated in the last section, we will also need to copy Banner tables into our database, as Banner contains the most up-to-date information about courses and faculty. The information that we retrieve from Banner will also be stored in text format, allowing the entire document to be visible within Microsoft Word, or any other word processing program.

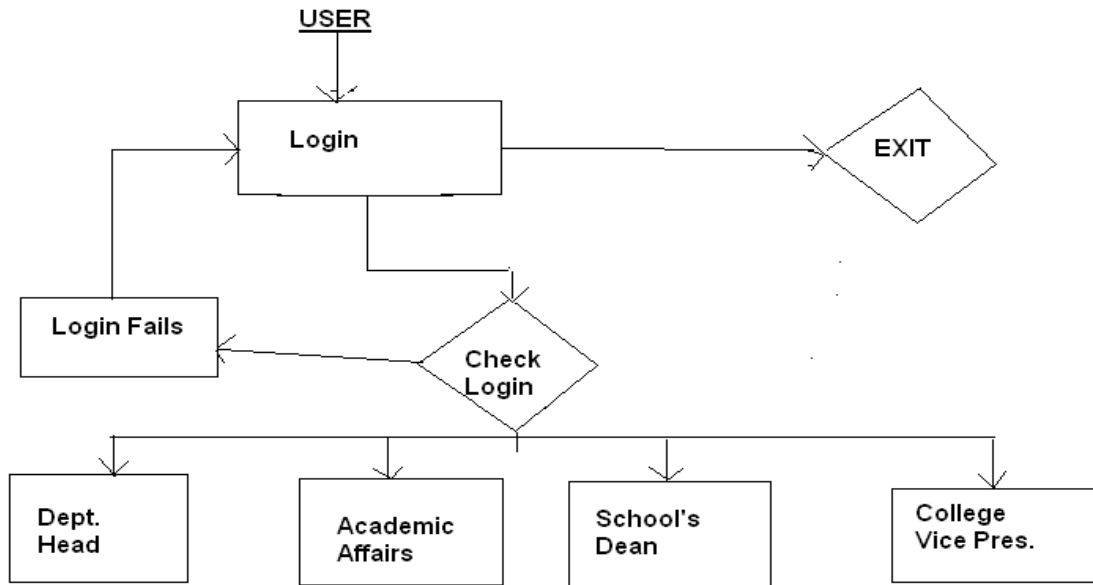
## 2.1 ERD Diagrams



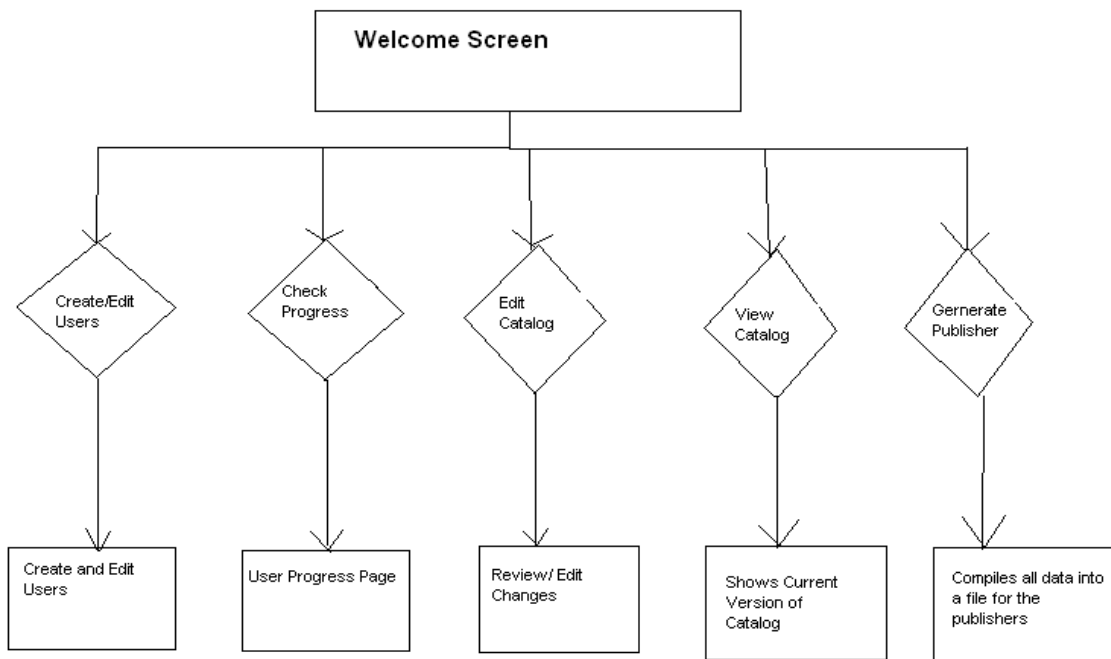


## 2.2 Structure Diagrams

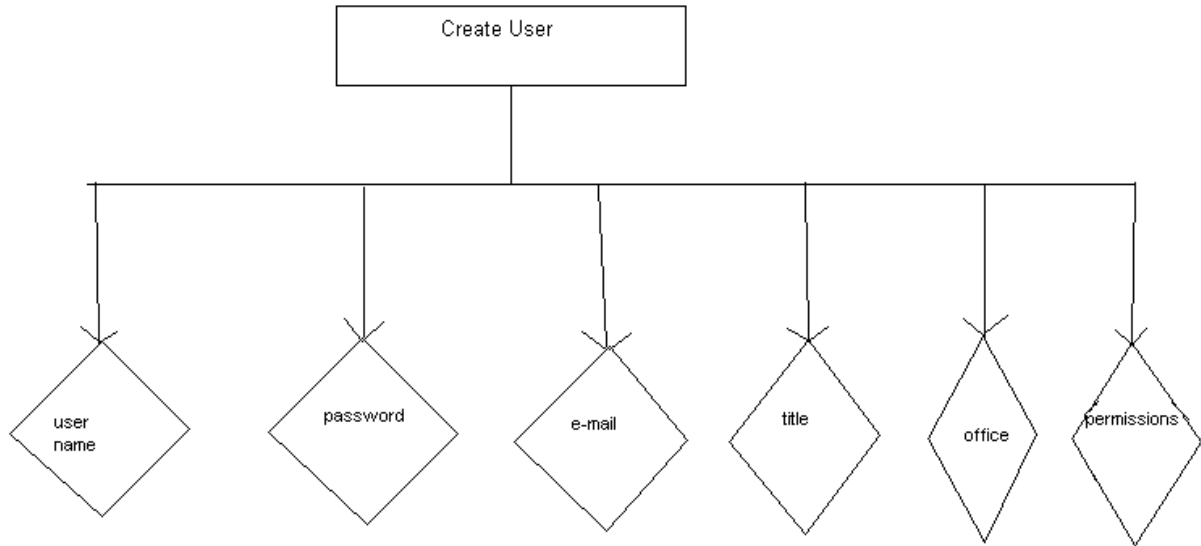
### Login Screen



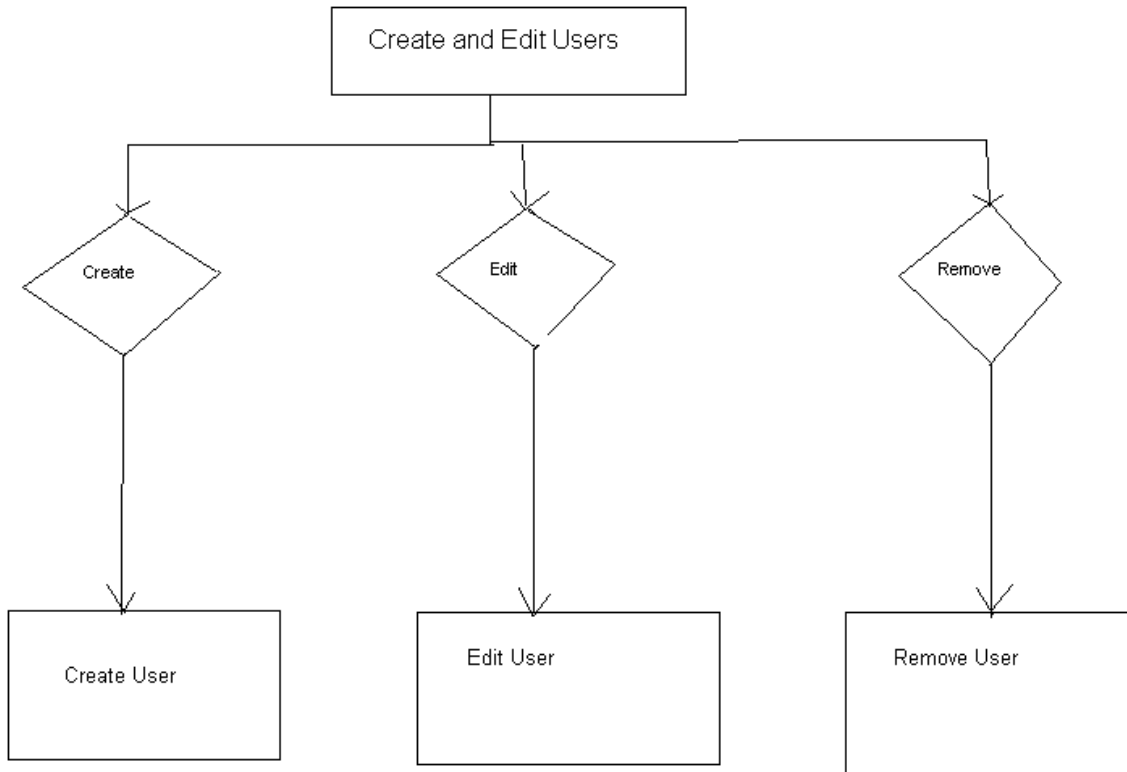
### Academic Affairs



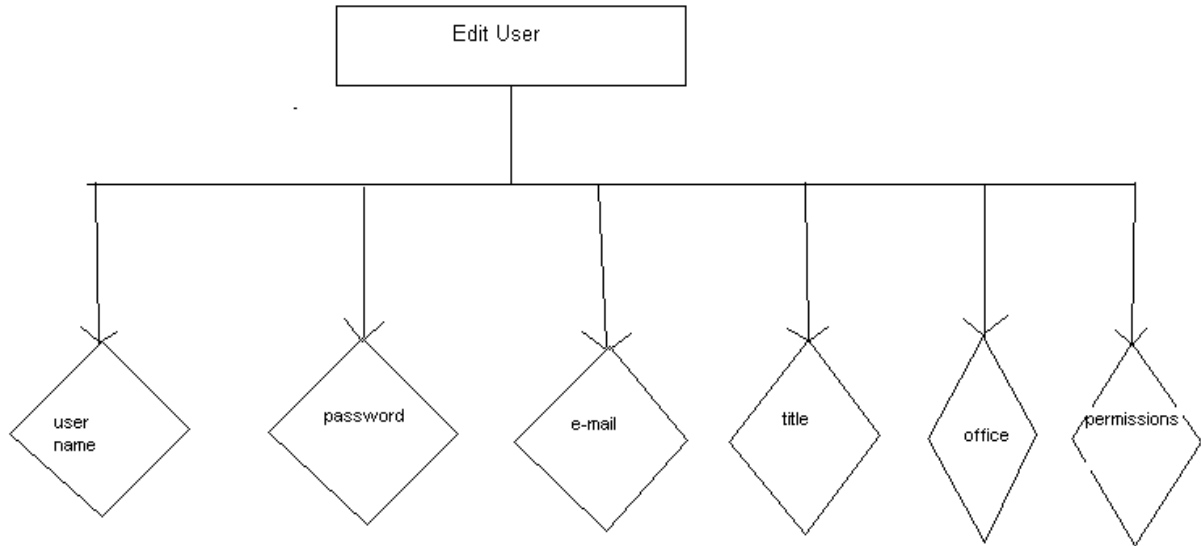
**Academic Affairs**



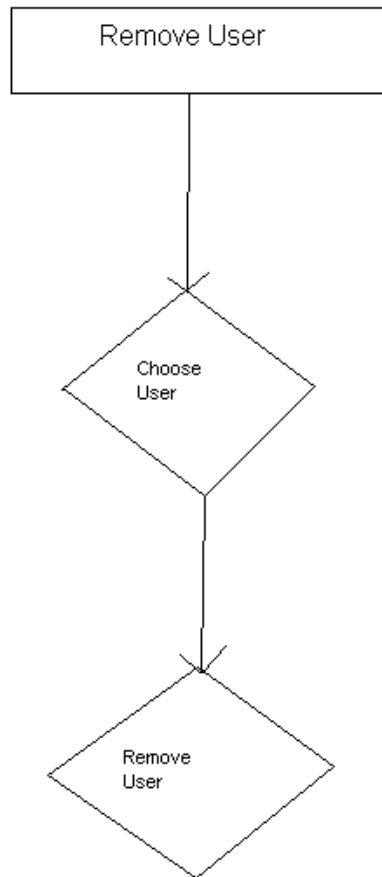
**Academic Affairs**



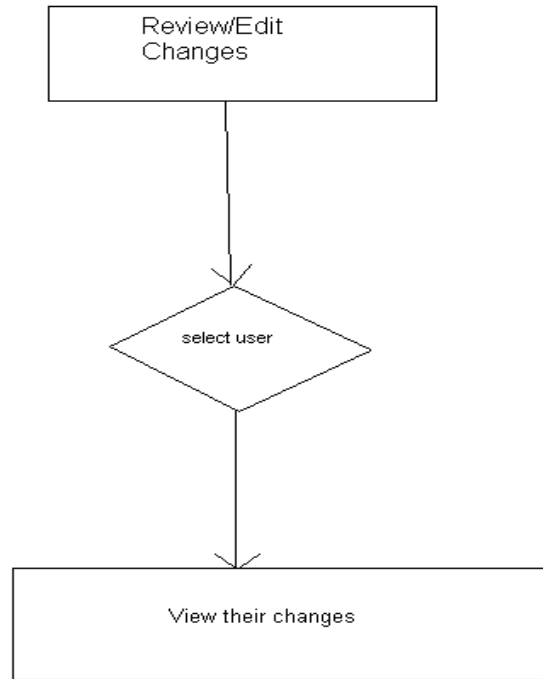
**Academic Affairs**



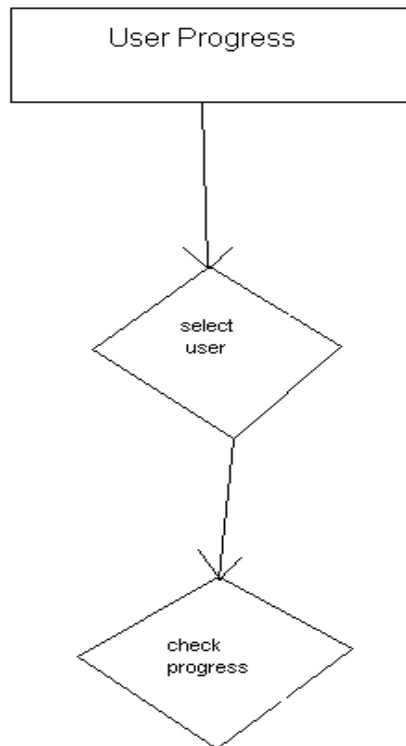
**Academic Affairs**



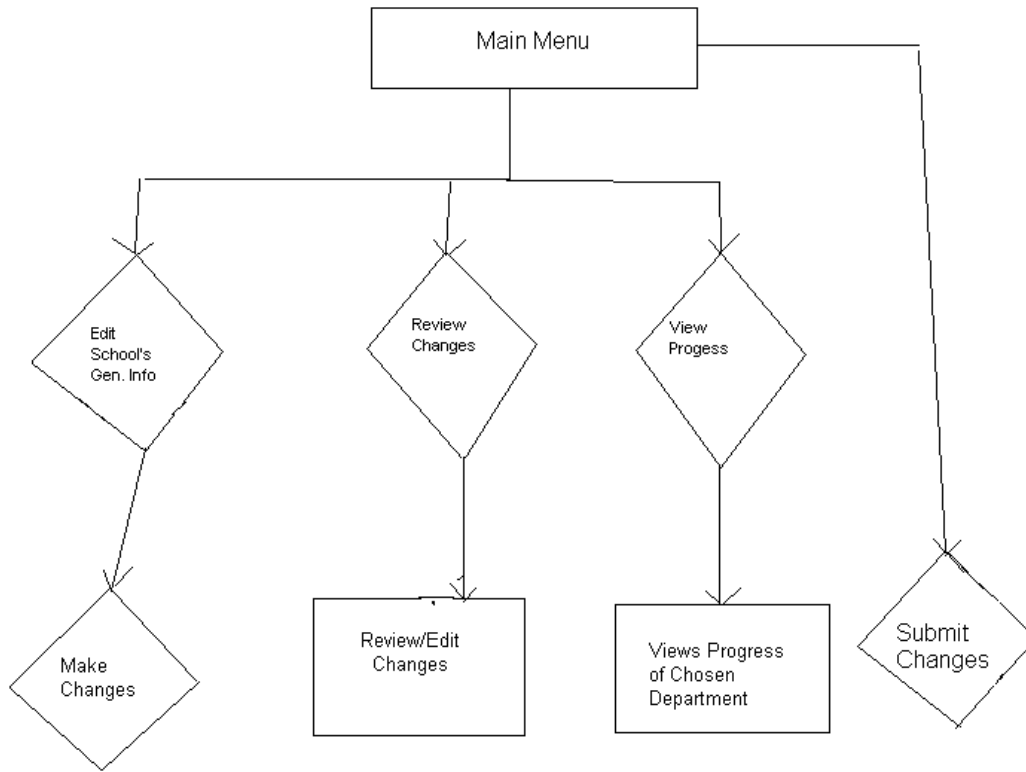
**Academic Affairs**



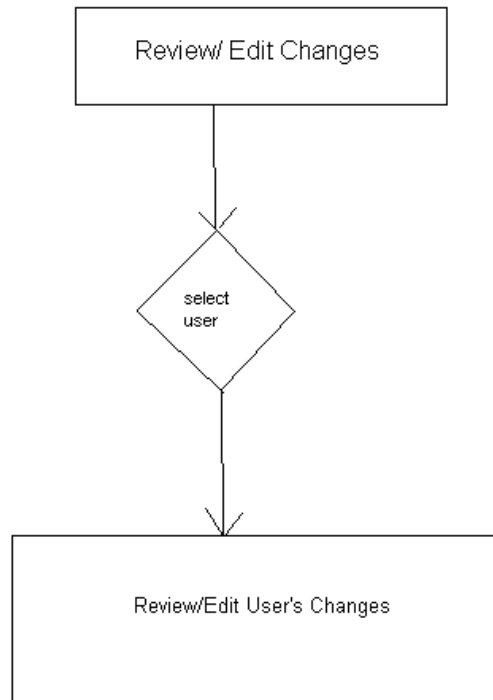
**Academic Affairs**



**Assistant Dean**

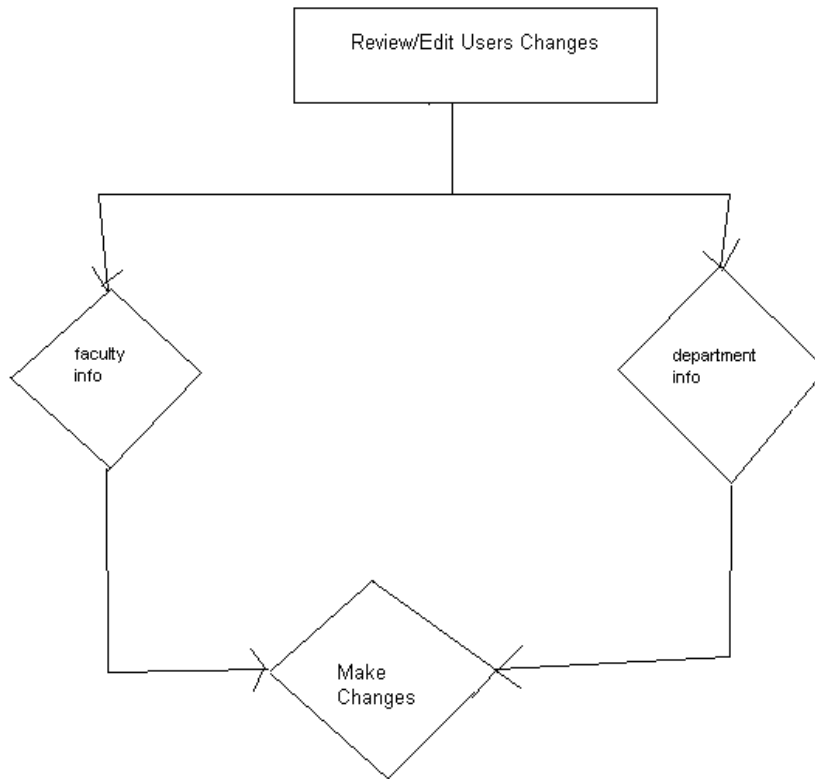


**Assistant Dean**

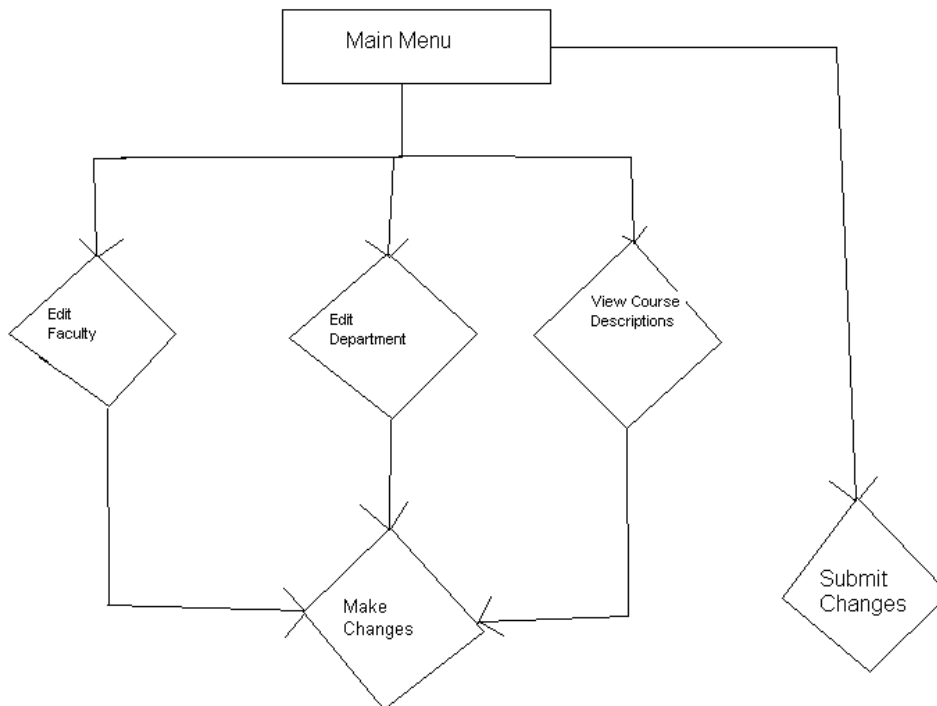




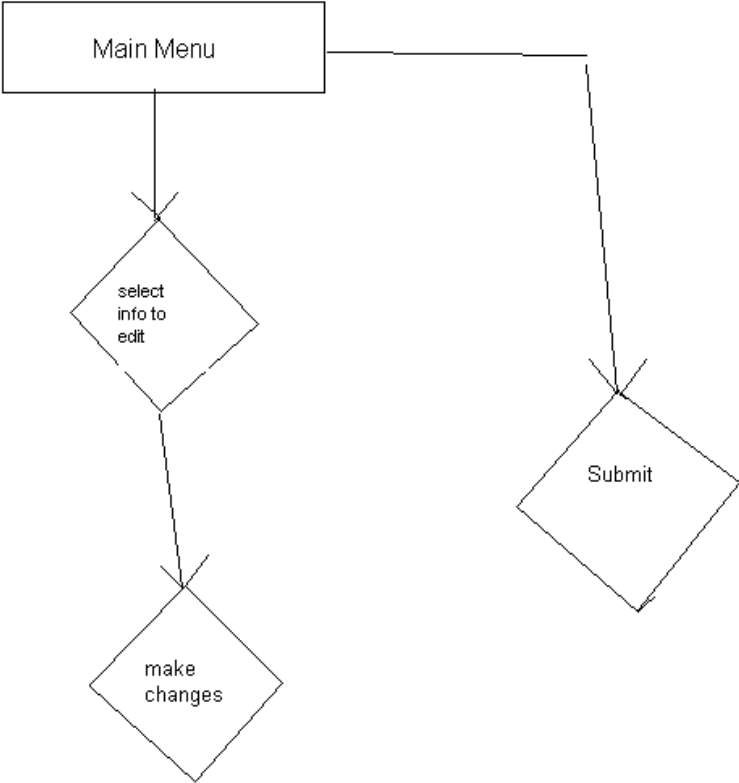
### Assistant Dean



### Department Head



College Vice President



## 2.3 Parameter Specification

### **Catalog DB Administrator Table:**

This table will store the information of the Catalog Database Administrator (i.e. Ms. Zimmerman), including the sections of the catalog that only s/he can edit. The personal information will include his/her User ID, name, e-mail, title department/office, her permissions, and her sections of the catalog.

### **Login Table:**

This table will store the information for all users. This information includes any information stored on the form where a user is created, including User ID, password, name, e-mail, school, and department/office.

### **Assistant Dean Table:**

This table stores all Assistant Deans. They link, via the “School” field to the appropriate school for editing. They also contained User ID, name, and e-mail.

### **School of Science/Business/Arts Tables:**

These tables contain the information for all Department Heads. It includes information needed from the login table such as permissions and e-mail, but also includes the sections of General Info, Professor Description, Course List/Requirements, and Course Description for editing within the catalog.

### **Program Directors Table:**

Program Directors have a similar table to the Schools tables for Department Heads. The only difference is that Program Directors do not report to an Assistant Dean. They contain information regarding courses, as well of off campus opportunities, multidisciplinary studies, pre-professional studies, and affiliation/articulation agreements.

### **President of Siena/VPAA/VPEP/VPFA/VPOP/VPSA/Career Center Tables:**

These tables contain information specific to the particular office of the College. It contains the User ID, name, e-mail, title, and department/office for each person, as well as the areas that must be edited by that specific office.

## 2.4 Functional Descriptions

The following functions are required for our system:

- The system will have a login screen for all authorized users, including department heads, school deans and assistant deans, college administrators, and members of the Academic Affairs staff. This screen must accept users when an authorized name and password is entered, and it must create an error message when something is otherwise unauthorized or incorrect.
- The system will have an authentication process to restrict unauthorized people.
- Department heads, school deans and assistant deans, college administrators, and the database administrator in Academic Affairs will allow have the ability to make changes to specified portions of the database. Department heads and college administrators can only modify information in their departments or information that their department controls, while users at the dean level may modify information in any department that it oversees. The head user at the Academic Affairs level (i.e., Ms Zimmerman) will be able to modify any changes to any department's information.
- Users at the dean level will have the ability to approve changes made in sections from those at the department head level.
- Users will receive confirmation that their request was received.
- The head user from Academic Affairs (i.e., Ms. Zimmerman) will have administrative [computer system] privileges and in turn, will have the ability to:
  - Create new users
  - Set or reset user passwords
  - Grant users proper access to the system
  - Remove or limit access from users
  - Make changes to information within the system
  - Deny changes submitted by any user
  - Approve final changes to the information to be stored in the catalog database
  - Delete a user and his/her system privileges at anytime
- The head user must monitor and maintain the database on a consistent basis to ensure the system is running and working properly.
- The software must be able to retrieve files from the Banner database (or, the Banner simulated database), and display those files when requested for viewing by any of the authorized users.
- The database must accept .doc or .txt files (whichever format our clients choose), and they must be able to save these files using the appropriate file-naming convention and in the appropriate tables.

### 3.1: Test Plan

## **Course Catalog Test Plan**

### *Introduction*

#### **Summary of the Items and Features to be Tested:**

**Course Catalog Database-** The Course Catalog Database will need to be developed and tested for the following:

- Ability to connect to the Course Catalog Program properly
  - The retrieval of data from the database to program
  - The storage of data to program database
  - Connection integrity
  - Database design

**Banner Database-**The Banner Database will need to be tested for the following:

- Ability to connect to the Banner Database properly
  - The retrieval of data from the database to the program
  - Connection integrity

**Course Catalog Program Website Interface-** The Course Catalog Program Website Interface will need to be tested for the following:

- Ability to connect properly to Databases
  - The retrieval of data from Banner Database
  - The retrieval of data from Course Catalog Database
  - The storage of data to Course Catalog Database
  - Connection integrity
- Ability to interact with users
  - Must be viewable by users
  - Must accept user input
  - Must give user required output
  - Stability
- Ability to perform actions listed below for Academic Affairs Administrator, Department Head User, Assistant Dean User, College Administrator User

**Academic Affairs Administrator-** The features that will be tested for the Academic Affairs Administrative user will include the following:

- Ability to log in as the Academic Affairs Administrator
  - Successfully log in as the Academic Affairs Administrator and have access to all necessary abilities and functions
- Ability to create a user
  - Create and store a username
  - Create and store a password
  - Input and store user e-mail information
  - Input and store user title information

- Input and store user office/department information
  - Set and store permissions for accessing data
- Ability to edit a user
  - Edit and store new username
  - Edit and store new password
  - Edit and store new e-mail
  - Edit and store new title
  - Edit and store new office/department
  - Edit and store new permissions
- Ability to remove a user
  - Ability to successfully remove a user and all information and permissions
- Ability to check user progress
  - View progress of all offices in terms of completion of verifying, or editing their assigned information
  - Send reminder e-mails to individuals that have not yet completed their portion of catalog revisions
- Ability to review changes made by other departments and if needed make additional changes
  - View original documents
  - View revised documents
  - Make changes to documents
  - Save changes made to documents
- Ability to view current catalog
  - View the current catalog that is already in print
- Ability to generate publishers copy
  - Generate hard copy if needed
  - Generate electronic copy if needed

**Department Head User-** The features that will be tested for the Department Head User will include the following:

- Ability to log in as a Department Head User
  - Successfully log in as a Department Head User and have access to all necessary abilities and functions
- Ability to edit faculty information
  - Make changes to faculty information document
  - Save changes made to faculty information document
- Ability to edit department information
  - Make changes to department information document
  - Save changes to department information
- Ability to view course descriptions
  - View current course descriptions to verify they are correct
- Ability to convey progress to higher users
  - Make progress know to Assistant Dean User and Academic Affairs Administrator
  - Submit revisions so that higher level users will be able to review and verify changes

**Assistant Dean User-** The features that will be tested for the Assistant Dean User will include the following:

- Ability to log in as an Assistant Dean User
  - Successfully log in as an Assistant Dean User and have access to all necessary abilities and functions
- Ability to edit *school* (Business, Liberal Arts, Science) information
  - Make changes to *school* information document
  - Save changes made to *school* information document
- Ability to review and/or edit Department Head level information
  - View original documents
  - View revised documents
  - Make changes to documents
  - Save changes made to documents
- Ability to view progress of Department Heads
  - View progress of all Department Heads in their given *school* in terms of completion of verifying, or editing their assigned information
  - Send reminder e-mails to individuals that have not yet completed their portion of catalog revisions
- Ability to convey progress to higher users
  - Make progress know to Academic Affairs Administrator
  - Submit revisions so that higher level users will be able to review and verify changes

**College Administrator User-** The features that will be tested for the College Administrator User will include the following:

- Ability to log in as an College Administrator User
  - Successfully log in as an College Administrator User and have access to all necessary abilities and functions
- Ability to review and/or edit assigned information
  - View original documents
  - Make changes to documents
  - Save changes made to documents
- Ability to convey progress to higher users
  - Make progress know to Academic Affairs Administrator
  - Submit revisions so that higher level users will be able to review and verify changes

### **References to Lower Level Test Plans:**

Some preliminary information on program functionality (i.e. User Command Summary), and GUI (Graphical User Interface) testing can be found in the Preliminary Design document for this project in sections 1.2, and 2.1 respectively.

## ***Test Items***

### **Test Items and Their Versions:**

The items which will be tested, which will undergo testing which can possibly result in changes, and their relating versions are:

\*XX refers to the final test version; the number will be incremented as changes are made to the specific item

<b><u>Item to be Tested</u></b>	<b><u>Test Version</u></b>	<b><u>Final Release Version</u></b>
Course Catalog Database	Version 1.XX	Version 2.0
GUI	Version 1.XX	Version 2.0
Application w/ DB Connections	Version 1.XX	Version 2.0

### **References to Related Documents:**

References that include information about the functionality of the program and how it should work can be found in the following documents:

- Software Plan
- Requirement Specifications
- Preliminary Design

These documents give an idea of the features and functions which will be tested.

### **Bug Reports Related to Test Items:**

Bugs and their fixes will be kept track on a SPR (Standard Problem Resolution) form. This form includes:

- Bug # (SPR #)
- Name of individual(s) who identified the problem
- Date the problem was identified
- Time the problem was identified
- Issue (authors initials)
- Possible solution (authors initials)
- Actual solution (authors initials)
- Person(s) that implemented solution
- Date solution was implemented
- Time solution was implemented
- Amount of time spent on problem solution

A copy of this form is included at the bottom of the testing section.

### **Items that are Specifically Not Going to be tested:**

Tests for all users will not be conducted due to time constraints. Instead tests will be performed for a specific individual in the given user group. It will then be assumed that specific user passes the tests then the rest of the users in that group will also pass the tests.



## *Features to be Tested*

### **All Software Features and Combinations of Features to be Tested:**

#### **Academic Affairs' Administrator (i.e. Ms. Zimmerman)- Administrator Home Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Click on "Create or Edit Users" link	"Create/Edit User" page opens	
Click on "Check User Progress" link	"User Progress" page opens	
Click on "Edit Catalog" link	"Review/Edit Changes" page opens	
Click on "Generate Publisher's Copy" link	Creates text document of catalog to be sent to publisher	
Click on "View Current Catalog" link	Opens PDF copy of current year's catalog	

#### **"Create/Edit User" Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Click on "Create New User" link	"Create User" page opens	
Click on "Edit Existing User" link	"Edit User" page opens	
Click on "Remove User" link	"Remove User" page opens	

#### **"Create User" Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
One of the Permissions links (School of Science, School of Liberal Arts, School of Business, Siena College) is clicked	Pop up of respective link (School of Science, School of Liberal Arts, School of Business, or Siena College) that shows all sections of the catalog controlled by that particular division	
"Create User" button clicked	Message box pops up saying "User Submitted"	
"User Correctly Submitted" box pops up – click "OK"	Redirects user to "Create/Edit User" page	
"Clear Form" button clicked	Erases all information previously entered in the text boxes for User Name, Password, E-mail, Title, and Office/Dept	

#### **Permissions Pop Up:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Window opens	All sections of the catalog are listed with working check boxes next to them	
"Grant permissions" button clicked	Message box pops up saying "Permissions Submitted"	
"Permissions Submitted" message box pops up – click "OK"	Redirects user back to "Create User" page	
"Clear Form" button clicked	All check boxes unchecked	

**“Edit User” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Window opens	List of all of the catalog system’s users, ordered by all college offices, followed by schools of business, liberal arts, and science listed in alphabetical order by last name	
Any user’s linked name is clicked	“Edit User Info” page opens, containing information for the particular user	

**“Edit User Info” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
One of the Edit Permissions links (School of Science, School of Liberal Arts, School of Business, Siena College) is clicked	Pop up of respective link (School of Science, School of Liberal Arts, School of Business, or Siena College) that shows all sections of the catalog controlled by that particular division	
“Create User” button clicked	Message box pops up saying “New User Info Submitted”	
“Clear Form” button clicked	Erases all information previously entered in the text boxes for User Name, Password, E-mail, Title, and Office/Dept	

**“Remove User” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Drop Down Menu	List of all of the catalog system’s users, listed in alphabetical order by last name	
“Remove User” button clicked	Message box pops up saying “User Removed”	
“User Removed” message box pops up – click “OK”	Redirects user to “Create/Edit User” page	

**“User Progress” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Window opens	List of all of the catalog system’s users, ordered by all college offices, followed by schools of business, liberal arts, and science listed in alphabetical order by last name, with his/her progress of “Complete” or “Incomplete”	
Any user’s name link is clicked	Opens users default mailing program to allow reminder emails.	

**“Review/Edit Changes” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Drop Down Menu	List of all of the catalog system’s users, listed in alphabetical order by last name, as well as option “Edit Directory Information”	
“Edit Directory Information” selected	Opens up original (read-only) version of directory information on the top of the screen, as well as an editable version of the directory information on the bottom of the screen	
Any other system user’s name selected	Opens up original (read-only) version of selected user’s edits on the top of the screen, and editable version of the selected user’s sections on the bottom of the screen (Editable Page)	

**Department Heads-  
Specific Department Head’s Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
“Edit Faculty Information” link clicked	Opens Editable Page of faculty information	
“Edit Department Information” link clicked (Link option not available for all department heads)	Opens Editable Page of department information	
“View Course Descriptions” link clicked	Opens read-only .doc version of the particular department’s course descriptions	
“Complete” check boxes	If clicked, marks boxes as checked	
“Submit Changes” button clicked	Message box pops up saying “Changes Submitted” Sections marked complete by check box are updated as complete on this page, as well as on Academic Affairs’ Administrator (i.e. Ms. Zimmerman) “User Progress” page	
“Changes Submitted” message box pops up – click “OK”	Redirects user to [Specific Department Head’s] home page	

**Assistant Deans-  
Specific Assistant Dean’s Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
“Edit School of [Business, Liberal Arts, or Science] General Information” link clicked	Opens Editable Page of School of [Business, Liberal Arts, or Science] general information	
“Review/Edit Changes” link clicked	“Review/Edit Changes” page opens	
“View Progress” link clicked	“School of [Business, Liberal Arts, or Science] Progress” page opens	
“Complete” check boxes	If clicked, marks boxes as checked	
“Submit Changes” button clicked	Message box pops up saying “Changes Submitted” Sections marked complete by check box are updated as complete on this page, as well as on Academic Affairs’ Administrator (i.e. Ms. Zimmerman) “User Progress” page	
“Changes Submitted” message box pops up – click “OK”	Redirects user to [Specific Assistant Dean’s] home page	

**“School of [Business, Liberal Arts, or Science] Progress” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Window Opens	List of all of the users within particular school, listed in alphabetical order by last name, with his/her progress of “Complete” or “Incomplete”	
Any user within particular school’s name link is clicked	E-mail is opened for the current user to send a reminder to the person whose name was clicked	

**“Review/Edit Changes” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Drop Down Menu	List of all of the users within a particular school, listed in alphabetical order by last name	
Any of user’s name selected	“Review/Edit [Selected Department Head’s] Changes” Page opens	

**“Review/Edit [Specific Department Head’s] Changes” Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
“Faculty Information” link clicked	Opens Editable Page of faculty information	
“Department Information” link clicked	Opens Editable Page of department information	
“Complete” check boxes	If clicked, marks boxes as checked	
“Submit Changes” button clicked	Message box pops up saying “Changes Submitted” Sections marked complete by check box are updated as complete on this page, as well as on Academic Affairs’ Administrator (i.e. Ms. Zimmerman) “User Progress” page	
“Changes Submitted” message box pops up – click “OK”	Redirects user to [Specific Assistant Dean’s] home page	

**College Administration-  
Specific College Administration Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Any link to any of the college administrator's editable sections of the catalog clicked	Opens Editable Page of containing the particular section that was selected	
"Complete" check boxes	If clicked, marks boxes as checked	
"Submit Changes" button clicked	Message box pops up saying "Changes Submitted" Sections marked complete by check box are updated as complete on this page, as well as on Academic Affairs' Administrator (i.e. Ms. Zimmerman) "User Progress" page	
"Changes Submitted" message box pops up – click "OK"	Redirects user to [Specific Assistant Dean's] home page	

**All Users-  
Login Page:**

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Type in URL for login page	Login page displays with all pictures, graphics, links, buttons, etc.	
Web Page	Web page should be accessible using Internet Explorer, Netscape, or Mozilla Firefox	
Login with valid username and password	Successfully enter the next web page for specified user; web page specific to user's preset settings	
Login with invalid username and password	Receive error message that either the username or password is incorrect	
Login with username and invalid password	Receive error message that either the username or password is incorrect	
Login with invalid username and invalid password	Receive error message that either the username or password is incorrect	

### All Editable Pages:

<i>Test Case</i>	<i>Expected Result</i>	<b>Pass/Fail</b>
Top	Must be read only – cannot be edited Sections coming from Banner (e.g. Course Descriptions) are viewed full screen and read only	
Bottom	Only contains editing capability buttons	
“Save” icon/button	Saves new version of document to database	
“Print” icon/button	Prints copy of edited section of the catalog	
“Undo Typing” icon/button	Undoes the last piece information typed	
“Redo Typing” icon/button	Redoes something that has recently been undone	
“Cut” icon/button	Cuts out highlighted text to clipboard	
“Copy” icon/button	Copies highlighted text to clipboard	
“Paste” icon/button	Pastes copied/cut text to selected section of the document (where the cursor lies)	
“Bold” icon/button	Changes font at cursor to bold	
“Italicize” icon/button	Changes font at cursor to italics	
“Underline” icon/button	Changes font at cursor to underline	

### Exception Testing:

We will also be performing exception testing to make sure that the program properly handles negative situations which may arise. This will help ensure that no data is lost or corrupted due to loop-holes in the program or possible user error. The testing will aim to test possible exceptions to the different units. One such example of a possible exception test is trying to create a user that already exists.

### Approach

#### Overall Approach to Testing:

The overall approach to testing will include unit level testing. The units will primarily be tested individually. However, if a given unit has dependencies with one or more other units, an integration test will occur to ensure their compatibility.

#### Testing Approach to be Used for Each Major Group of Features:

The testing approach to be used with all major groups and features will be based on testing the individual units in the groups. The units will be tested by themselves, and when integrated they will then be tested to ensure that they function together properly. This bottom up approach will help ensure that problems are identified early, and will cut down on debugging time required. This will allow us more time to ensure the requirements are met in a satisfactory fashion.

### **Major Activities, Techniques, and Tools Which are Going to be Used to Test the Groups:**

The major activities, techniques, and tools which will be used to test groups will be determined as the project progresses further into the development stages.

### **Minimum Degree of Comprehensiveness Required:**

The minimum degree of comprehensiveness required will depend on the major activities, techniques and tools which will be decided upon at a later date.

### **Techniques Which Will be Used to Judge Comprehensiveness:**

Techniques which will be used to judge comprehensiveness will be decided at a later date.

### **Additional Completion Criteria:**

Any additional completion criteria will be determined at a later date.

### **Techniques Which Will be Used to Trace Requirements:**

Techniques which will be used to trace requirements will be decided at a later date.

### **Significant Constraints on Testing:**

The significant Constraints on testing are as follows:

- The limited number of people which are available for testing the application
- The deadline for the project is the Academic Celebration

### ***Item Pass/Fail Criteria***

#### **Criteria to be Used to Determine Whether Each Test Passes or Fails:**

The criteria which will be used to determine whether the test item passes or fails testing is as follows:

- Task has to perform action specified
- Task has to perform action in a reasonable amount of time
- Task has to be performed with correct data
- Task has to be performed without errors
- Task has to display output correctly

## ***Suspension Criteria and Resumption Requirements***

### **Criteria to be Used to Suspend the Testing Activity:**

Testing activity will be suspended under the following circumstances:

- Major code problems
- Minor code problems linked to only one module
- Extenuating circumstances which result in the inability of all team members to continue testing

### **Testing Activities Which Must be Redone When Testing is Resumed:**

- In the event of a major code problem all testing that can in anyway be related to the change should be retested, or if the change was extensive testing should be restarted
- In the event of a minor code problem all testing related to the module that was changed should be retested

## ***Test Deliverables***

### **Deliverable Documents:**

Documents that will be delivered upon the completion of testing will include:

- Updated test plan document (If any revisions are made)
- Test incident reports (SPRs)
- Test summary

### **Test Input and Output Data:**

Test input data will be derived from the following locations:

- Course Catalog Database text files
- Banner Database files
- User input

Test data will be output to the following locations:

- Printer
- GUI



## ***Testing Tasks***

### **Tasks Necessary to Prepare for and Perform Testing:**

- Program needs to be in final stages of development
- All critical modules need to be completed
- Databases need to be developed
- Database connections must be operational
- Files need to be seeded into the database

### **Task Interdependencies:**

Task interdependencies exist between the databases and the programs. The databases need to be developed and configured in order for other aspects to be designed to access and store data. Likewise, the program needs to be operational in order for users to retrieve and input data into the database.

## ***Environmental Needs***

### **Environmental Needs:**

- **Server**
  - Host Course Catalog Database
  - Database software
  - Ethernet cards to connect to internet
- **Desktop Computers**
  - Allow users to access application
  - Ethernet cards to connect to internet
  - Microsoft word (pending client decision)
  - Internet Browser

### **Required Level of Security:**

Security information is as follows:

- Security level is MEDIUM
  - Program is not critical to operation of college
  - Limited access through User IDs and Passwords to preserve integrity of data
  - User IDs can be changed as frequently as needed
  - User Passwords can be changed as frequently as needed
  - Firewalls can be setup to allow only certain IPs to access program

## ***Responsibilities***

### **Groups Responsible for Managing, Designing, Preparing, Executing, Witnessing, Checking, and Resolving Issues Involving Testing:**

Team Spartacus Computing Solutions is responsible for all aspects of testing

### **Groups Responsible for Providing Test Items Identified in the Test Items Section**

Team Spartacus Computing Solutions is responsible for providing all test items identified in the Test Items section

### **Groups Responsible for Providing the Environmental Needs Identified in the Environmental Needs section:**

Siena College is responsible for providing all environmental needs identified in the Environmental Needs section

## ***Staffing and Training Needs***

### **Staffing and Training Needs:**

Staffing and training needs are as followed

- Application Administrator user
  - Requires most training
  - Responsible for overseeing other users
  - Responsible for creating other users
  - Responsible for deleting other users
  - Responsible for editing other users
  - Responsible for final verification on all data used in course catalog
- Database Administrator
  - Medium training
  - Responsible for maintaining server based Course Catalog Database
- Department Head, Assistant Dean, College Administrator users
  - Basic training
  - Responsible for editing and verifying their respective data

### **Training Options for Providing Necessary Skills**

Training for the application will be provided through the following means:

- A typed step-by-step tutorial will be provided
  - How to add users
  - How to delete users
  - How to edit users
  - How to check user progress

- How to send reminders
- How to edit data
- How to save data
- How to log in
- How to generate electronic catalog
- How to generate print catalog
- How to view catalog
- One-on-one training can be provided also initially to cover the same processes as are listed above

## ***Schedule***

### **Test Milestones:**

Test Milestones are as follows:

- Course Catalog Database design tested
- Database and application interaction tested
- Academic Affairs capabilities tested
- Department Head capabilities tested
- Assistant Dean capabilities tested
- College Administrator capabilities tested
- Final pre acceptance test check
- Acceptance test

### **Estimate Time Required to do Each Testing Task:**

Testing time required for each task will vary. However, the typical range of time to complete any given task should be between 30 seconds and 10 minutes.

### **Schedule for all Testing Tasks and Test Milestones:**

Schedule for testing tasks and test milestones are still pending. All work and testing will be completed by the Siena College Academic Celebration.

## ***Risk and Contingencies***

### **High-Risk Assumptions of the Test Plan:**

High-risk assumptions of the test plan are that if one case for a given user works correctly, then the same case should work for all users. This is a high-risk assumption that is only being made because of the time constraints on our group.

**Contingency Plans:**

If this high-risk event came into reality then steps would have to be taken to correct the error in coding as quickly as possible. Then tests would need to be undertaken to ensure that the problem was correctly fixed.

***Approvals***

**Names and Titles for Approval:**

**Michael Cervone, Spartacus Computing Solutions Team Leader**

X \_\_\_\_\_

**Ms. Kate Zimmerman, Siena College Academic Program Administrator**

X \_\_\_\_\_

**Mr. Brian Smith, Siena College Web Master**

X \_\_\_\_\_

SPR Form      SPR # \_\_\_\_\_

Name of individual(s) who identified problem: \_\_\_\_\_

Date problem was identified:    /    / 05

Time problem was identified:        :        AM / PM

***Issue:***

Initials: \_\_\_\_\_

***Possible Solution:***

Initials: \_\_\_\_\_

***Actual Solution:***

Initials: \_\_\_\_\_

Person(s) that implemented solution: \_\_\_\_\_

Date solution was implemented:    /    / 05

Time solution was implemented:        :        AM / PM

Amount of time spent on problem solution: \_\_\_\_\_ Days    \_\_\_\_\_ Hours    \_\_\_\_\_ Minutes

## 4.1: Physical Data Structures and Data File Specification

The following are a list of tables needed in order for our catalog database system to function properly. All fields denoted in any of the tables as being part of the catalog text are specific to the type of user for which the table is created. The file naming convention for these fields are as follows:

*FieldName\_UserID\_TimestampWithDate.txt*

This will allow the user to continue editing his/her selection of the text until a user at a level higher than him/her opens the same document. The document most recent to the current date will be what the user at the next level will open for their starting, editable document.

Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
TableofContents	Text	Catalog Text for Table of Contents - Character size 3000
CommunicationsDirectory	Text	Catalog Text for Communications Directory - Character size 5000
AcademicCalendar	Text	Catalog Text for Academic Calendar - Character size 3000
Directory	Text	Catalog Text for Directory - Character size 7500
Index	Text	Catalog Text for Index - Character size 3000

Field Name	Data Type	Description
UserID	Text	Contains all user IDs within the system - Character size 15
Password	Text	Contains corresponding passwords for the user IDs - Character size 15
School	Text	Corresponding school for user - Character size 13
Department/Office	Text	Corresponding dept/office for user - Character size 30
Name	Text	Full name of user - Character size 40
Email	Text	Stored for purposes of e-mailing forgotten password - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, VP, or DB Administrator) - Character size 20
Permissions	Text	Access that user has within database - Character size 100

Field Name	Data Type	Description
Use:ID	Text	Depending on user ID given, links to appropriate school of the college - Character size 15
School	Text	School for each department head - Character size 13
Name	Text	Full name of user - Character size 40
Email	Text	E-mail of user - Character size 40

SchoolArts : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
School	Text	School links to Login Table - Defaults to Liberal Arts - Character size 13
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department	Text	For individual department heads, their departments - Character size 30
Permissions	Text	Access that user has within database - Character size 100
ProfDescription	Text	Area that most department heads have for catalog edits - Character Size 2000
GeneralInfo	Text	Area that most department heads have for catalog edits - Character Size 2000
CourseListRequirements	Text	From Banner; cannot be changed by department heads but can be viewed - Character size 2000
CourseDescription	Text	From Banner; cannot be changed by department heads but can be viewed - Character size 2000

SchoolBusiness : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
School	Text	School links to Login Table - Defaults to Business - Character size 13
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department	Text	For individual department heads, their departments - Character size 30
Permissions	Text	Access that user has within database - Character size 100
ProfDescription	Text	Area that most department heads have for catalog edits - Character Size 2000
GeneralInfo	Text	Area that most department heads have for catalog edits - Character Size 2000
CourseListRequirements	Text	From Banner; cannot be changed by department heads but can be viewed - Character size 2000
CourseDescription	Text	From Banner; cannot be changed by department heads but can be viewed - Character size 2000

SchoolScience : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
School	Text	School links to Login Table - Defaults to Science - Character size 13
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department	Text	For individual department heads, their departments - Character size 30
Permissions	Text	Access that user has within database - Character size 100
ProfDescription	Text	Area that most department heads have for catalog edits - Character Size 2000
GeneralInfo	Text	Area that most department heads have for catalog edits - Character Size 2000
CourseListRequirements	Text	From Banner; cannot be changed by department heads but can be viewed - Character size 2000
CourseDescription	Text	From Banner; cannot be changed by department heads but can be viewed - Character size 2000

ProgramDirectors : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
MultidisciplinaryArea	Text	Corresponding Multidisciplinary Program Area - Character size 100
OffCampusOpportunityArea	Text	Corresponding Off Campus Opportunities Program Area - Character size 100
PreProfessionalStudiesArea	Text	Corresponding PreProfessional Studies Program Area - Character size 100
Affiliation/ArticulationAgreement	Text	Corresponding Affiliation/Articulation Agreements Program Area - Character size 100
GeneralInfo	Text	Catalog Text for General Info about Program - Character size 3000
Professors	Text	Catalog Text for list of Professors - Character size 3000
CourseList/Requirements	Text	Catalog Text for Course Lists & Requirements - From Banner - Character size equiv. to Banner
CourseDescription	Text	Catalog Text for Course Descriptions - From Banner - Character size equiv. to Banner

President of Siena : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
SCGeneralInfo	Text	Catalog Text for General Info about Siena College - Character size 3000
FoundingofCollege	Text	Catalog Text for Founding of the College - Character size 3000
FranciscanLibArtsTradition	Text	Catalog Text for Liberal Arts Tradition - Character size 3000
MissionStatement	Text	Catalog Text for Mission Statement - Character size 3000

VPAA : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
LibraryAVResources	Text	Catalog Text on Library/AV Resources - Character size 3000
AcademicIntegrity	Text	Catalog Text on Academic Integrity - Character size 3000
StudentRecords	Text	Catalog Text for Student Records - Character size 3000
StudentAccessToRecords	Text	Catalog Text for Student Access to Records - Character size 3000
AcademicInfoRegulations	Text	Catalog Text for Academic Information & Regulations - Character size 3000
DegreeRequirements	Text	Catalog Text for Degree Requirements - Character size 3000
CoursesOfInstruction	Text	Catalog Text for Courses of Instruction - This info comes from Banner - Character size equiv. to Banner

VPIP : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
Accreditation	Text	Catalog Text for Siena's Accreditation - Character size 3000
RetentionRates	Text	Catalog Text for Retention Rates of Siena - Character size 3000
AdmissiontoCollege	Text	Catalog Text for Admission to the College info - Character size 3000
FinancialAid	Text	Catalog Text for Financial Aid information - Character size 3000

VPFA : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of User - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
ITS	Text	Catalog Text for Information & Technology Services - Character size 3000
ComputerEthics	Text	Catalog Text for Computer Ethics - Character size 3000
ComplianceStatements	Text	Catalog Text for Compliance Statements - Character size 3000
ChargesToSCRRegulations	Text	Catalog Text for Charges to the College Regulations - Character size 5000
UndergradTuition&Fees	Text	Catalog Text for Undergraduation Tuition & Fees - Character size 3000



VPOP : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
GrowthOfFacilities	Text	Catalog Text for the Growth of Campus Facilities - Character size 3000
CrimeStatistics	Text	Catalog Text for Campus Crime Statistics - Character size 3000
SpecialPrograms	Text	Catalog Text for Special Programs of the College - Character size 5000
DirectionsToSiena	Text	Catalog Text for Directions to the College - Character size 3000

VPSA : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
HealthRequirements	Text	Catalog Text regarding Health Requirements for Siena - Character size 3000
SienaCommunity	Text	Catalog Text on the Siena Community - Character size 7500

CareerCenter : Table		
Field Name	Data Type	Description
UserID	Text	User ID links to Login Table - Character size 15
Name	Text	Full name of user - Character size 30
Email	Text	User's e-mail address - Character size 40
Title	Text	Title of User (Department Head, Assistant Dean, or DB Administrator) - Character size 20
Department/Office	Text	Office in which the user works - Character size 30
Permissions	Text	Access that user has within database - Character size 100
CareerServices	Text	Catalog Text on Career Services - Character size 3000

The following tables are required from the Banner database in order to access course information for the purposes of our catalog database. All information collected for these tables, included descriptions of the various fields, was provided by Ms. Stephanie Kot of Information & Technology Services (I&TS), and Mr. Jim Serbalik, Director of the Registrar. They are listed in alphabetical order by the table name.

Field Name	Data Type	Description
SCBCRKY_SUBJ_CODE	Text	Length 4; No Nulls; Displays the Subject area of courses in the system
SCBCRKY_CRSE_NUMB	Text	Length 5; No Nulls; Displays the Course Number of courses in the system
SCBCRKY_TERM_CODE_STA	Text	Length 6; No Nulls; From Term of the earliest version of the course
SCBCRKY_TERM_COD_END	Text	Length 6; No Nulls; To Term of the latest version of the course
SCBCRKY_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the date the record was created or updated

Field Name	Data Type	Description
SCBCRSE_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCBCRSE_CRSE_NUMB	Text	Length 5; No Nulls; Defines course number associated with the subject for the course
SCBCRSE_EFF_TERM	Text	Length 6; Identifies the term this version of the course becomes effective
SCBCRSE_COLL_CODE	Text	Length 2; Used to specify the college which offers the course
SCBCRSE_DIVS_CODE	Text	Length 4; Used to specify the division which offers the course, if desired
SCBCRSE_DEPT_CODE	Text	Length 4; Used to specify the department which offers the course, if desired
SCBCRSE_CSTA_CODE	Text	Length 1; Course Status Code: Required Field; Used to prevent creation of section of the course based on Active/Inactive flag
SCBCRSE_TITLE	Text	Length 30; Used to specify the title of the course which will be in effect for the effective term; free format field
SCBCRSE_CIPC_CODE	Text	Length 6; Used to record the CIP code of the course (used to identify primary subject matter of a course)
SCBCRSE_CREDIT_HR_IND	Text	Length 2; Defines whether the course can be offered for variable credit
SCBCRSE_CREDIT_HR_LOW	Number	Length 7; Scale 3; Specifies the minimum number of credits for which a course may be offered
SCBCRSE_CREDIT_HR_HIGH	Number	Length 7; Scale 3; Either to define a second valid credit hour value or to define the high credit hour value within a range
SCBCRSE_LEC_HR_IND	Text	Length 2; Defines whether the course can be offered for variable lecture hours
SCBCRSE_LEC_HR_LOW	Number	Length 7; Scale 3; Used to specify the minimum number of lecture hours for which a course may be offered
SCBCRSE_LEC_HR_HIGH	Number	Length 7; Scale 3; Either to define a second valid lecture hour value or to define the high lecture hour value within a range
SCBCRSE_LAB_HR_IND	Text	Length 2; Defines whether the course can be offered for variable lab hours
SCBCRSE_LAB_HR_LOW	Number	Length 7; Scale 3; Used to specify the minimum number of lab hours for which a course may be offered
SCBCRSE_LAB_HR_HIGH	Number	Length 7; Scale 3; Either to define a second valid lab hour value or to define the high lab hour value within a range
SCBCRSE_OTH_HR_IND	Text	Length 2; Defines whether the course can be offered for variable other hours
SCBCRSE_OTH_HR_LOW	Number	Length 7; Scale 3; Used to specify the minimum number of other hours for which the course can be offered
SCBCRSE_OTH_HR_HIGH	Number	Length 7; Scale 3; To define a second valid other hour value or to define the high other hours value within a range
SCBCRSE_BILL_HR_IND	Text	Length 2; Defines whether the course can be billed for variable credit
SCBCRSE_BILL_HR_LOW	Number	Length 7; Scale 3; Used to specify the minimum number of credits for which the course can be billed based on defined assessment rules
SCBCRSE_BILL_HR_HIGH	Number	Length 7; Scale 3; Defines a second valid billing hours value or to define the high billing hours value within a range
SCBCRSE_APRV_CODE	Text	Length 1; Used to record the type of requirements a course is approved to fulfill
SCBCRSE_REPEAT_LIMIT	Number	Length 2; Used to record the maximum number of times the course may be repeated by a student; Default to 0
SCBCRSE_PWAY_CODE	Text	Length 1; Used to record the type of authorization a student must have in order to waive a pre-requisite requirement
SCBCRSE_TUITW_IND	Text	Length 1; Specifies whether the course is exempt from tuit. and fees defined on Reg. Fees Process Control Form - SFARGFE
SCBCRSE_ADD_FEES_IND	Text	Length 1; Used to record that additional fees, outside of the SFARGFE assessment rules, are charged for the course
SCBCRSE_ACTIVITY_DATE	Date/Time	Length 7; Specifies the date the record was created or updated
SCBCRSE_CONT_HR_LOW	Number	Length 7; Scale 3; Contains the sum of low lecture, lab, and other hours columns
SCBCRSE_CONT_HR_IND	Text	Length 2; Contains the literal TO or OR to define the relationship between the low and high contact hours
SCBCRSE_CONT_HR_HIGH	Number	Length 7; Scale 3; Contains the sum of the high lecture, lab, and others hours columns
SCBCRSE_CEU_IND	Text	Length 1
SCBCRSE_REPS_CODE	Text	Length 2; Repeat status code used for reporting purposes
SCBCRSE_MAX_RPT_UNITS	Number	Length 9; Scale 3; Maximum number of credits permitted
SCBCRSE_CAPP_PREREQ_TE	Text	Length 1; No Nulls; Indicates whether CAPP areas or existing prerequisite and test score restrictions are in effect
SCBCRSE_DUNT_CODE	Text	Length 4; Duration Unit code indicates the type of duration the course is offered for
SCBCRSE_NUMBER_OF_UNITS	Number	Length 7; Scale 2; Duration number of units indicates the total number of times the duration unit extends

Field Name	Data Type	Description
SCBDESC_SUBJ_CODE	Text	Length 4; No Nulls; Indicates the subject code of the course
SCBDESC_CRSE_NUMB	Text	Length 5; No Nulls; Indicates the course number of the course
SCBDESC_TERM_CODE_EFF	Text	Length 6; No Nulls; Identifies the term this version of the course becomes effective
SCBDESC_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Date that the information for the row was inserted or updated in the SCBDESC table
SCBDESC_USER_ID	Text	Length 30; No Nulls; Unique identification of the user who changed the record
SCBDESC_TEXT_NARRATIVE	Text	Length 4000; Course descriptive text is maintained here
SCBDESC_TERM_CODE_END	Text	Length 6; Identifies the term that the course description effective term ends

Field Name	Data Type	Description
SCBSUPP_SUBJ_CODE	Text	Length 4; No Nulls; Subject code for the scbcrse table; combined with course number
SCBSUPP_CRSE_NUMB	Text	Length 5; No Nulls; Course number from the scbcrse table; combined with subject code
SCBSUPP_EFF_TERM	Text	Length 6; No Nulls; Effective term; combined with subject code and course number
SCBSUPP_TOPS_CODE	Text	Length 6; Taxonomy of program code
SCBSUPP_OCCS_CODE	Text	Length 2; Occupational Course Indicator code
SCBSUPP_CCCL_CODE	Text	Length 2; Classification code
SCBSUPP_COOP_ED_IND	Text	Length 1; Cooperative Education indicator
SCBSUPP_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Identifies the most recent date a record was created or updated
SCBSUPP_PERM_DIST_IND	Text	Length 12; Permanent District Identifier
SCBSUPP_CUDA_CODE	Text	Length 15; Course Institutional Reporting Element 1 Code
SCBSUPP_CUDE_CODE	Text	Length 15; Course Institutional Reporting Element 2 Code
SCBSUPP_CUDC_CODE	Text	Length 15; Course Institutional Reporting Element 3 Code
SCBSUPP_CUDD_CODE	Text	Length 15; Course Institutional Reporting Element 4 Code
SCBSUPP_CUDE_CODE	Text	Length 15; Course Institutional Reporting Element 5 Code
SCBSUPP_CUDF_CODE	Text	Length 15; Course Institutional Reporting Element 6 Code
SCBSUPP_CREDIT_CATEGOR	Text	Length 5; Code for California MIS process for field CB22

Field Name	Data Type	Description
SCRATTR_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRATTR_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRATTR_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course attributes become effective
SCRATTR_ATTR_CODE	Text	Length 4; Defines the attribute code of the course
SCRATTR_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Identifies the date the record was created or updated

Field Name	Data Type	Description
SCRORC_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRORC_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRORC_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course corequisites become effective
SCRORC_SUBJ_CODE_COF	Text	Length 4; Used to define co-requisite subjects for a course
SCRORC_CRSE_NUMB_COF	Text	Length 5; Defines the course number of the co-requisite course requirements
SCRORC_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or updated

Field Name	Data Type	Description
SCR_PRT_SUBJ_CODE	Text	Length 4; No Nulls; Subject code for catalog course partitions
SCR_PRT_CRSE_NUMB	Text	Length 5; No Nulls; Course Number for catalog course partitions
SCR_PRT_TERM_CODE_EFF	Text	Length 6; No Nulls; Effective term code for catalog course partition code
SCR_PRT_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Identifies the most recent date a record was created/updated
SCR_PRT_USER_ID	Text	Length 30; No Nulls; User ID of last person to create/update record
SCR_PRT_PARS_CODE	Text	Length 7; Partition code for catalog course entry
SCR_PRT_PARS_PREF_NUMB	Number	Length 2; Preference number for Partition code for catalog course entry

Field Name	Data Type	Description
SCR_RDF_SUBJ_CODE	Text	Length 4; No Nulls; Subject code for catalog course room definition/attributes
SCR_RDF_CRSE_NUMB	Text	Length 5; No Nulls; Course Number for catalog course room definitions/attributes
SCR_RDF_TERM_CODE_EFF	Text	Length 6; No Nulls; Effective Term code for catalog course room definition/attribute code
SCR_RDF_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Identifies the most recent date a record was created/updated
SCR_RDF_USER_ID	Text	Length 30; No Nulls; User ID of last person to create/update record
SCR_RDF_RDF_CODE	Text	Length 4; Room definition/attribute code for catalog course entry
SCR_RDF_RDF_PREF_NUMB	Number	Length 2; Preference Number for room definition/attribute code for catalog course entry

SCRFQIV : Table		
Field Name	Data Type	Description
SCRFQIV_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRFQIV_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRFQIV_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course equivalents becomes effective
SCRFQIV_SUBJ_CODE_ECIV	Text	Length 4; Defines an equivalent course subject code for the master course
SCRFQIV_CRSE_NUMB_ECIV	Text	Length 5; Defines the course number of the equivalent course
SCRFQIV_START_TERM	Text	Length 6; Specifies the start term of the course version which is equivalent to the course entered in the Key Block
SCRFQIV_END_TERM	Text	Length 6; Specifies the end term of the course version which is equivalent to the course entered in the Key Block
SCRFQIV_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or entered

SCRFEEES : Table		
Field Name	Data Type	Description
SCRFEEES_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRFEEES_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRFEEES_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course fees becomes effective
SCRFEEES_DETIL_CODE	Text	Length 4; Defines detail codes which can be assessed for the course in the Key Block
SCRFEEES_FEE_IND	Text	Length 1; Used to specify whether the course fee will be assessed on a per-credit hour basis (C) or on a flat basis (F)
SCRFEEES_FEE_IND_IND	Number	Length 1; Field used to convert the fee indicator of F - flat or C - per credit to a 1 or 0
SCRFEEES_FEE_AMOUNT	Number	Length 6; Scale 2; If Form TSADETC has a defined default amount for the detail code it will default here when the detail code is entered
SCRFEEES_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or updated
SCRFEEES_FTYP_CODE	Text	Length 4; Fee Type code: This field is used to identify the type of fee to fee assessment

SCRGMOD : Table		
Field Name	Data Type	Description
SCRGMOD_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRGMOD_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRGMOD_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of course grading modes becomes effective
SCRGMOD_GMOD_CODE	Text	Length 1; No Nulls; Define grading mode authorizations for a course
SCRGMOD_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Identifies the most current date record was created or updated
SCRGMOD_DEFAULT_INC	Text	Length 1; Specify the grading mode which will default for the grading mode on the Registration Form - FAREGS

SCR_EVL : Table		
Field Name	Data Type	Description
SCR_EVL_SUBJ_CODE	Text	Length 4; No Nulls; Defines subject area of the course
SCR_EVL_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCR_EVL_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course level becomes effective
SCR_EVL_LVL_CODE	Text	Length 2; No Nulls; Used to authorize the level for which a course may be offered; must be authorized to be offered for at least one level
SCR_EVL_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or updated

SCR_RARE : Table		
Field Name	Data Type	Description
SCR_RARE_SUBJ_CODE	Text	Length 4; No Nulls; Course subject code
SCR_RARE_CRSE_NUMB	Text	Length 5; No Nulls; Course number
SCR_RARE_TERM_CODE_EFFI	Text	Length 6; No Nulls; identifies the term this version of the course registration Area restriction becomes effective
SCR_RARE_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Date of last update or insert
SCR_RARE_SEQNO	Number	Length 23; Scale 20; Sequence number used to insure the record will be in the correct order
SCR_RARE_AREA	Text	Length 10; Defines the Area(s) of students for which course registration restrictions exist

SCRRCAM : Table		
Field Name	Data Type	Description
SCRRCAM_SUBJ_CODE	Text	Length 4; No Nulls Catalog campus restriction subject code
SCRRCAM_CRSE_NUMB	Text	Length 5; No Nulls Catalog campus restriction course number
SCRRCAM_EFF_TERM	Text	Length 6; No Nulls Catalog campus restriction effective term
SCRRCAM_REC_TYFE	Text	Length 1; No Nulls Catalog campus restriction record type
SCRRCAM_CAMP_IND	Text	Length 1; Catalog campus restriction inclusion or exclusion indicator
SCRRCAM_CAMP_CODE	Text	Length 3; Catalog campus restriction campus code
SCRRCAM_ACTIVITY_DATE	Date/Time	Length 7; No Nulls Activity Date

SCRRCLS : Table		
Field Name	Data Type	Description
SCRRCLS_SUBJ_CODE	Text	Length 4; No Nulls Defines the subject area of the course
SCRRCLS_CRSE_NUMB	Text	Length 5; No Nulls Defines course number associated with subject for the course
SCRRCLS_EFF_TERM	Text	Length 6; No Nulls Identifies the term this version of course registration classification restrictions becomes effective
SCRRCLS_REC_TYFE	Text	Length 1; No Nulls Defines if the record contains a class indicator (value: 1) or a class code (value: 2)
SCRRCLS_CLASS_IND	Text	Length 1; Indicates if classification codes entered should be included (value: I) or excluded (value: E) in restriction the course
SCRRCLS_CLAS_CODE	Text	Length 2; Defines the classification codes of students for which course registration restrictions exist
SCRRCLS_ACTIVITY_DATE	Date/Time	Length 7; No Nulls Specifies the most current date record is created or updated

SCRRCOL : Table		
Field Name	Data Type	Description
SCRRCOL_SUBJ_CODE	Text	Length 4; No Nulls Defines the subject area of the course
SCRRCOL_CRSE_NUMB	Text	Length 5; No Nulls Defines course number associated with subject for the course
SCRRCOL_EFF_TERM	Text	Length 6; No Nulls Identifies the term this version of course registration college restrictions becomes effective
SCRRCOL_REC_TYFE	Text	Length 1; No Nulls Defines if the record contains a college indicator (value: 1) or a college code (value: 2)
SCRRCOL_COLL_IND	Text	Length 1; Indicates if college codes entered should be included (value: I) or excluded (value: E) in restriction the course
SCRRCOL_COLL_CODE	Text	Length 2; Defines the college(s) of students for which course registration restrictions exist
SCRRCOL_ACTIVITY_DATE	Date/Time	Length 7; No Nulls Specifies the most current date record is created or updated

SCRREDEG : Table		
Field Name	Data Type	Description
SCRREDEG_SUBJ_CODE	Text	Length 4; No Nulls; Course subject area code
SCRREDEG_CRSE_NUMB	Text	Length 5; No Nulls; Course number
SCRREDEG_TERM_CODE_EFF	Text	Length 6; No Nulls; Identifies the term this version of the course registration degree restriction becomes effective
SCRREDEG_REC_TYFE	Text	Length 1; No Nulls; Defines if the record contains a degree indicator (value: 1) or a degree code (value: 2)
SCRREDEG_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Date of last update or insert
SCRREDEG_DEGC_IND	Text	Length 1; Indicates if the degree codes entered should be include (value: I) or excluded (value: E) in restriction of course
SCRREDEG_DEGC_CODE	Text	Length 6; Defines the degree(s) of students for which course registrations exist

SCRRLVL : Table		
Field Name	Data Type	Description
SCRRLVL_SUBJ_CODE	Text	Length 4; No Nulls, Course Level Restriction Subject Code
SCRRLVL_CRSE_NUMB	Text	Length 5; No Nulls, Course Level Restriction Course Number
SCRRLVL_EFF_TERM	Text	Length 6; No Nulls, Course Level Restriction Effective Term
SCRRLVL_REC_TYFE	Text	Length 1; No Nulls, Course Level Restriction Record Type
SCRRLVL_LEVL_IND	Text	Length 1; Course Level Restriction Indicator
SCRRLVL_LEVL_CODE	Text	Length 1; Course Level Restriction Level Code
SCRRLVL_ACTIVITY_DATE	Date/Time	Length 7; No Nulls, Identifies the most recent date a record was created or updated

SCRMAJ : Table		
Field Name	Data Type	Description
SCRMAJ_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRMAJ_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRMAJ_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course registration major restrictions becomes effective
SCRMAJ_REC_TYPE	Text	Length 1; No Nulls; Defines if the record contains a major indicator (value: 1) or a major code (value: 2)
SCRMAJ_MAJOR_IND	Text	Length 1; Indicates if major codes entered should be included (value: I) or excluded (value: E) in restricting the course
SCRMAJ_MAJR_CODE	Text	Length 4; Defines the majors of students for which registration restrictions exist
SCRMAJ_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or updated

SCRPRG : Table		
Field Name	Data Type	Description
SCRPRG_SUBJ_CODE	Text	Length 4; No Nulls; Course subject area code
SCRPRG_CRSE_NUMB	Text	Length 5; No Nulls; Course number
SCRPRG_TERM_CODE_EFF	Text	Length 6; No Nulls; Identifies the term this version of the course registration program restriction becomes effective
SCRPRG_REC_TYPE	Text	Length 1; No Nulls; Defines if the record contains a program indicator (value: 1) or program code (value: 2)
SCRPRG_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Date of last update or insert
SCRPRG_PROGRAM_IND	Text	Length 1; Indicates if Program codes entered should be included (value: I) or excluded (value: E) in restriction of course
SCRPRG_PRGRAM	Text	Length 12; Defines the Program(s) of students for which course registration restrictions exist

SCRRTST : Table		
Field Name	Data Type	Description
SCRRTST_SUBJ_CODE	Text	Length 4; No Nulls; Subject code that the test score restriction and pre-requisite associated with
SCRRTST_CRSE_NUMB	Text	Length 5; No Nulls; Course number that the test score restriction and pre-requisite associated with
SCRRTST_TERM_CODE_EFF	Text	Length 6; No Nulls; Effective term associated with the test score restriction and pre-requisite
SCRRTST_SEONO	Number	Length 23; Scale 20; Sequence number used to insure the record will be in the correct order
SCRRTST_TEST_CODE	Text	Length 4; Test code associated with the restriction
SCRRTST_TEST_SCORE	Text	Length 5; The minimum score of the test code
SCRRTST_SUBJ_CODE_PREC	Text	Length 4; Defines the subject area for course pre-requisite requirements
SCRRTST_CRSE_NUMB_PREC	Text	Length 5; Defines the course number for course pre-requisite requirements
SCRRTST_LVL_CODE	Text	Length 2; Level code for grade
SCRRTST_MIN_GRDC	Text	Length 6; Minimum grade required
SCRRTST_CONCURENCY_IT	Text	Length 1; Specifies that the pre-requisite course requirement can be taken at the same time as the Key Block Course
SCRRTST_CONNECTOR	Text	Length 1; AND/OR connector used when restriction for the subject/course/term can have an AND/OR relationship
SCRRTST_LPAREN	Text	Length 1; Left Parenthesis
SCRRTST_RPAREN	Text	Length 1; Right Parenthesis
SCRRTST_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Date the record was created or last updated

SCFSBGI : Table		
Field Name	Data Type	Description
SCFSBGI_SUBJ_CODE	Text	Length 4; No Nulls; Source background institution agreement subject code
SCFSBGI_CRSE_NUMB	Text	Length 5; No Nulls; Source background institution agreement course number
SCFSBGI_EFF_TERM	Text	Length 6; No Nulls; Source background institution agreement effective term
SCFSBGI_SBG_CODE	Text	Length 6; Source background institution code
SCFSBGI_AGREEMENT_DATE	Date/Time	Length 7; No Nulls; Source background agreement date
SCFSBGI_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Activity Date

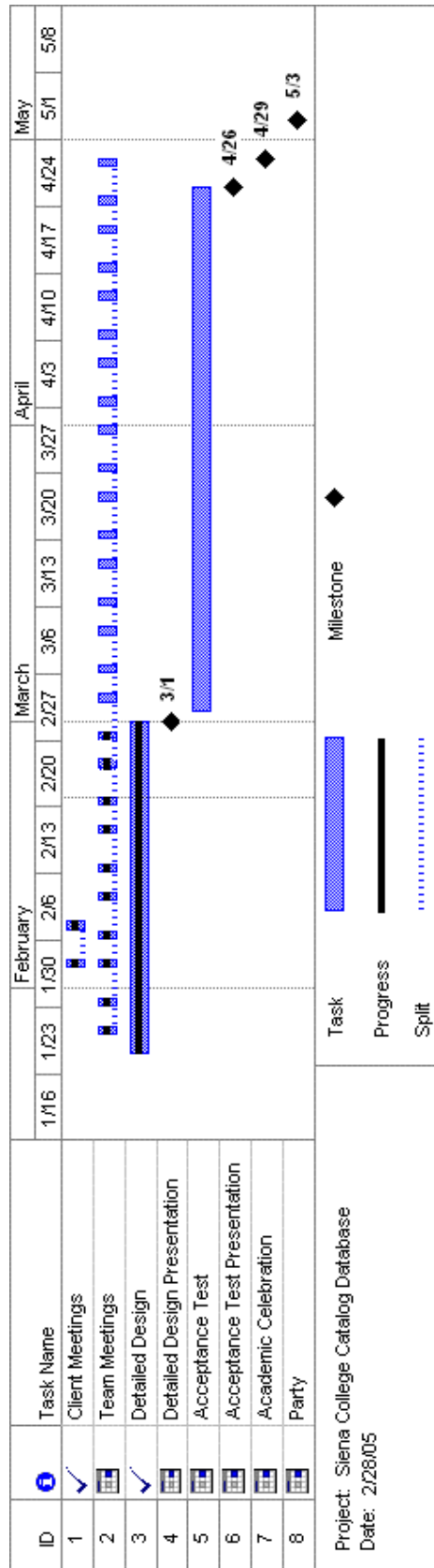
SCRSCHD : Table		
Field Name	Data Type	Description
SCRSCHD_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRSCHD_CRSE_NUMB	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRSCHD_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course schedule types becomes effective
SCRSCHD_SCHD_CODE	Text	Length 3; No Nulls; Defines the schedule type codes which can be authorized for a course
SCRSCHD_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or updated
SCRSCHD_WORKLOAD	Number	Length 9; Scale 3; Instructional workload value for the schedule type
SCRSCHD_MAX_ENRL	Number	Length 3; Maximum student enrollment for workload
SCRSCHD_ADJ_WORKLOAD	Number	Length 9; Scale 3; Adjust instructional workload value for the schedule type
SCRSCHD_INSM_CODE	Text	Length 5; Instructional Method code; This field indicates how the course is delivered to the learner

SCRTEXT : Table		
Field Name	Data Type	Description
SCRTEXT_SUBJ_CODE	Text	Length 4; No Nulls; Defines the subject area of the course
SCRTEXT_CRSF_NUMBR	Text	Length 5; No Nulls; Defines the course number associated with the subject for the course
SCRTEXT_EFF_TERM	Text	Length 6; No Nulls; Identifies the term this version of the course text becomes effective
SCRTEXT_TXT_CONF	Text	Length 1; Used to internally resequence text when a new line has been added. Valid value is "A"
SCRTEXT_SEQNO	Number	Length 23, Scale 2; Identifies an internal sequence number associated with each line of text
SCRTEXT_TEXT	Text	Length 60; Course text is maintained in these records
SCRTEXT_ACTIVITY_DATE	Date/Time	Length 7; No Nulls; Specifies the most current date record was created or updated

## 4.2: Packaging Specification

Our software package will include an instructional manual that will provide assistance to the user. This manual will provide the user with information regarding installation and usage of the software. All users will be given a copy of this manual to instruct them on login procedures and a step-by-step guide to how the system works. Also the system administrator will be given additional information regarding permission setting.

## 5.A: Gantt Chart





## 5.B: Glossary of Terms

**Access** – A relational database running under Microsoft Windows; used to simulate the database that will eventually be created in MySQL

**Attribute** – A characteristic of an entity

**Browser** – An application program that provides a way to look at and interact with all the information on the World Wide Web.

**Code** – Symbolic arrangement of data or instructions in a computer program, or a set of such instructions.

**Controlled Decentralized** – An organizational structure for teams, in which a team leader is defined, but all problem solving and decision-making is the responsibility of the group.

**Database** – An information management system used for storing and retrieving related data.

**Data Store** – Generic physical files that contain data necessary for the program, but which is external from the software developed.

**Data flow diagram** – A representation of the functional decomposition of a system.

**Dreamweaver** – A program used in the development of web pages.

**Entity** - An object or concept about which information is stored within the database

**Entity-Relationship Diagram (ERD)** – Diagrams that illustrate the logical structure of databases

**Gantt Chart** – A graphical-based, progressive timeline containing relevant dates, often used with regard to planning and tracking a project.

**GUI** – *Graphical User Interface*: A user interface based on graphics (icons, pictures, and menus) instead of text; uses a mouse as well as a keyboard as an input device.

**HTML** – *Hypertext Transfer Markup Language*: A markup language used to structure text and multimedia documents and to set up hypertext links between documents, used extensively on the World Wide Web.

**Hypertext** – A computer-based text retrieval system that enables a user to access particular locations in web pages or other electronic documents by clicking on links within specific web pages or documents.

**Internet** – An interconnected system of networks that connects computers around the world via the TCP/IP protocol.

**Java Script** – A language used in the development of web pages.

**Linear Sequential Model** – Sometimes called the *classic life cycle* or the *waterfall model*, this model, originally developed by W.W. Royce, suggests a systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing, and support.

**mySQL** – Open-Source database software

**Network** – A network of data processing nodes that is interconnected for the purpose of data communication.

**Open-Source** – A method and philosophy for software licensing and distribution designed to encourage use and improvement of software by making the code freely available.

**Oracle** – A relational database management system that runs on most mainframe, micro, and personal computers.

**PHP** – PHP: Hypertext Preprocessor (server-side scripting language).

**Process** – An activity that changes or manipulates data.

**Protocol** – A standard procedure for regulating data transmission between computers.

**Query** – A data retrieval request.

**Relational Database** – A database system in which any database file can be a component of more than one of the database's tables

**Relationship** – Describes how two entities share information within the database

**Software** – Written programs, procedures, or rules and associated documentation pertaining to the operation of a computer system and that are stored in read/write memory.

**SQL** – *Structured Query Language*: A language used in the creation and maintenance of databases.

**Use Case** – Set of scenarios that show a usage of the system by a certain user.

**User** – An individual that has signed onto a system and has been assigned a user name and password.

**Username** – A system created login for users.

**Universal User** – Any person, whether directly or indirectly involved with the system, who has the ability to perform certain functions. In the case of the *Siena College Catalog Project*, any universal user has the ability to view the Siena College Catalog via the Internet.

**Visual Basic** – A popular event-driven visual programming system from Microsoft Corporation for Microsoft Windows.

**Web-based** – Uses the World Wide Web (via HTML) on the Internet to gain access to the system.