Shaw University  
College of Graduate and Professional Studies  
Department of Computer Information Sciences  

Course Number: CSC 312 Fall 2008  
Course Name: Computer Organization and Architecture  
Credit Hours: 3  

Professor’s Name: Dr. Walter Johnson  

Contact Information:  
Office Location and Number Graphics Building #3  
Phone Number: (919) 546-8383  
E-mail Address: wjohnson@shawu.edu  
Office Hours: Daily & Internet Blackboard  

TEXT  

Supplementary Materials: All lectures and projects that are required may be found on Blackboard under the course named “Computer Systems & Architectures”  

Hardware Requirements: A computer with Internet access.  

Software Requirements: A list of software the student is required to purchase or download for the course, Real Player, Media Player, Acrobat Reader, etc.  

Prerequisites and Corequisites: CSC 202.
1. INSTRUCTIONS ON HOW TO LOG IN

Follow these steps to log onto Blackboard from Shaw University’s home page:

1. Go to Shaw University Website  www.shawu.edu
2. Look down on the right bottom corner of the page, you will see a link to Blackboard
3. Click on Blackboard, you will see a window like the following:

4. Click on User Login

5. Type in your **student ID number** (you will find it on your ID Card) as your **Username**, and type in your **PIN Number** (The PIN number you were given by the Registrar when you registered, if you do not remember your PIN number, you
can either ask your adviser or call the Registrar’s office at 546-8426) as your password. Your PIN number normally consists of two up case letters and some numbers. If you still have difficulty in logging into Blackboard, please call 546-8323 for help. Please use your Shaw email address that is provided.

6. If you registered in a class, your name will be transferred over to blackboard automatically. **If you registered for a class, you will automatically have a blackboard account.**

**2. Instructions on How To Navigate Blackboard**

1. After you successfully log into your Blackboard account, you will see the following screen:

![Blackboard Interface](image)

2. You will see all the classes you have registered for on the right panel, click the class you want to navigate, and the next window you see should look like the one below:
3. The first thing you must do is to check the class **Announcements**.

The **Announcements** page is typically the first page of your course. Course announcements may also appear within your course list after you log in. If the Announcements do not show up in either of these places, please look for a link elsewhere, such as on the left-hand navigation menu (Course Menu).

**TIPS:**

- Many instructors and mentors use it for timely messages: to announce changes in scheduling or to remind students of fast-approaching deadlines.

- You are responsible for any announcement by your instructor, so check the Announcements area at least twice a week.

- As you approach due dates for assignments and exam dates, check your Announcements area more frequently for timely information.

4. Main components

- **Course Documents** -- course outlines, handouts, lectures, course readings, etc.
• **Staff Information** -- the biographies of the instructor and others who teach or support the course

• **Assignments** -- links to activities, projects, quizzes, etc.

• **Resources** -- links to other sites, such as to e-journals and the campus homepage

Instructors can also use the built-in Communication and Student Tools, which enable both asynchronous and synchronous activities:

• **E-mail Sender** -- pre-addressed forms enable any course participant to send e-mail to any individual or group within the class.

• **Discussion Board** -- instructors can assign asynchronous discussions on designated topics, and instructors can sort postings by author and date.

• **Class Roster** -- The e-mail address or homepage of any class member can be accessed from this page.

• **Virtual Classroom** -- class members can be assigned to conduct real-time talks from this page.

• **Digital Drop Box** -- assignments can be dropped off by students and retrieved and returned by instructors.

• **Check Grades** -- instructors can post a student's score for any assignment, quiz, or exam (along with total possible points and class average).

• **Group Pages** -- instructors can assign groups within a class to a set of communication tools for use only by those group members.

• **Class Statistics** -- instructors can access reports on students' activities, from time spent on the site to the website pages accessed.

### 4. INSTRUCTIONS ON ACCESSING ASSIGNMENTS AND TURNING IN ASSIGNMENTS

Your courses may require the use of the **Assignments** tool for submitting papers and other assignments that instructors can grade, and the grade is automatically transferred to your My Grades area.

**Digital Drop Box**
Below is the typical method for accessing the drop box in your course. Your instructor may place links elsewhere in the course to the Drop Box tool, and it could be named slightly different.

Step 1: On the Course Menu, select **Course Tools**.

For example:

Step 2: Select **Digital Dropbox**.
Step 3: Decide whether to **Add** or **Send** the file:

**Use the Add File function:**

- To place a file in the **Drop Box** that you want to send to your mentor, teaching assistant or instructor at a later time.

- To "save" a file (or assignment) in your **Drop Box** that you have been working on and cannot save on the computer that you are using; just log on to your course website and add the file to your **Drop Box**.

**Use the Send File function:**

- To send a file (or assignment) to your mentor, teaching assistant, or instructor.

Step 4a: If you clicked **Add File**, browse for the file on your computer and upload it.

Once uploaded, the path to the file is shown in the File box.
You may need to name your file according to specific directions given in your course. Check these directions carefully.

Step 4b: If you clicked **Send File:**

Select a file or Upload a new file:

**Select File (only available for previously Added files):** click the drop-down arrow and select an existing file from your drop box. Perhaps you previously added a file but didn't want to send it at that time.

OR

**Upload New File:** Browse for the file on your computer.

Step 5: Optionally fill in a **Name** and enter any **Comments**. If you don't enter a name, the file name is used.

**CAUTION:** If you selected a File you previously added, anything that you input in the Name and Comments fields will not stick. The instructor(s) will not see your comments. The name and any comments you provided during the **Add File** process are used.

If you uploaded a New File, the Name and Comments are visible to the instructor(s).

Step 6: Click **Submit**.

Here is an example of the **Send File** process:

![File Information](image1)

Based on the example above, here is what to expect to see after clicking Submit:

![Add File, Send File](image2)
TIPS:

- You cannot remove a file from your drop box once you have sent it.

- Your instructor, mentor, or teaching assistant may return graded assignments to the Drop Box so you can retrieve them. When your assignment has been returned, you will see the instructor's name with the file. Just right-click on the name and click Save Target As to download the file to your computer.

- Three good practices to follow for naming files:
  
  o Always save your work to your computer hard drive in your course work folder.

  o Follow the naming convention that your instructor sets for class files, or if he or she does not suggest one, create your own that includes:
    - The week or unit number of the assignment (e.g., Week 1 might be wk1)
    - Your user name or last name (e.g., smith)

  Thus, an assignment submitted by John Smith for Week 1 might be named, wk1smith.rtf.

  o Save each file that you will send to your instructor, mentor, or teaching assistant as a Rich Text Format or .rtf file to ensure that the document retains its formatting.

4. HOW TO USE DISCUSSION BOARD

Below is the typical method for accessing the Discussion Board tool in your course. Your instructor may place links elsewhere in the course to the Discussion Board tool, and it could be named slightly different.

Step 1: On the Course Menu, select Communication.

For example:
Step 2: Select **Discussion Board**.

For example:

- Announcements
- Collaboration
- Discussion Board
- Group Pages
- Messages
- My Help Desk
- Roster
- Send Email

Step 3: Select the **Forum** you were instructed to go to.

For example:
Here is an example Discussion Forum:

**Threads**

**Messages in a Thread**
TIPS:

Reading Messages

On the Thread Detail page, in the middle area, all the messages in that thread are indexed in chronological order (oldest to newest). Use the scroll bar in the message index area to scan through all messages. The hyperlink for new or unread messages is in boldface blue font. Click on a post's hyperlink to read the message; the message text and all the details about that message are listed at the bottom.

Posting messages to the forum (two options)

Option 1: You can reply to an existing message in the forum by opening and reading a message, and then clicking on the Reply button to respond. When you are writing your reply, the original message will not be displayed, so click the Show Original Post link to see the message you are replying to. For example:
When you are ready to send your reply, click on the **Submit** button at the bottom of the Reply to Post screen. Unless messages are being moderated, everyone who has access to this forum will see your message immediately. In moderated forums, Managers or Moderators have to approve the message before it gets published to the forum.

**Option 2:** You can post a new message to start a new discussion thread by clicking on the **Thread** button located at the top left portion of the web page displaying the index of threads. For example:

![Course Discussions:Activity 1: Getting Acquainted](image)

**NOTE:** If the Thread button is not available, the Instructor for Leader of the forum is not allowing participants to create new threads. Contact your instructor for directions.

### Entering Subject Headings

When posting a reply, clear the subject heading and enter a **new subject heading** to identify the purpose and intent of your reply. Meaningful and descriptive titles will make it easier for you and other students to see the direction and flow of the discussions when viewing the index of posts in a thread.

### Modifying and Deleting Your Messages

It is possible that your instructor may have configured the forum to allow you to modify and delete any messages you have posted to the forum. To **modify** a previously posted message, click on the message and then click on the **Modify** button located by the Reply button in the message detail area. If you have permission to delete the message, click on the **Remove** button.

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### 5. THINGS NEED TO KEEP IN MIND
1. **When you start to take a quiz or test you must finish within the allotted time frame, you can not go back.** Blackboard does not let you start over again.

2. For distance learning students: **your attendance is kept by the system automatically recording the time and date** you log on and log out of Blackboard.

3. Additional help can be obtained from the helpdesk tab located on the top page tab of Blackboard section and select Blackboard knowledge base.

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**INSTRUCTIONS ON HOW TO CHANGE STUDENTS’ EMAIL WITHIN BLACKBOARD**

You **MUST** incorporate the automated campus E-MAIL address into BLACKBOARD in order for you to communicate with your classmates and instructors.
1. **When you log on to Blackboard, click on **Tools** on the left panel of your course, as seen below:**

![Blackboard Tools Panel](image)

**Strongly recommend you to check Blackboard announcement before you come in the class.**

2. **You will see a screen that looks like the one below:**
3. You will see a screen that looks like;

Click on "Edit Personal Information"
4. YOU WILL SEE A SCREEN THAT LOOKS LIKE:

![Screen Shot]

5. IF YOU DO NOT KNOW YOU SHAWBEARS’ E-MAIL ADDRESS, GO BACK TO SHAW’S HOME PAGE AND CLICK ON STUDENT E-MAIL LINK;
6. **You will see a set of instructions select #2:**

Instructions for Student E-Mail

Please read all of the instructions before attempting to log in to your e-mail account.

1. Emails will be deleted from your mailbox after 120 days.
2. All deleted emails in your "Deleted Items" will be deleted every night.

Your account is a unique combination of letters and numbers based on your first name, your last name and your student ID number. For instance Joe Davidson may have an email account of joedavidson@shawbears.com the characters before the @ symbol make up your User Name. When giving others your email account, use the complete email address (example: joedavidson@shawbears.com).

**Step #1.** If you already know your email login information (user name and password) then click [here](#) to access your email.

**Step #2.** If you do not know your email login information then click [here](#) to search for your user name and password.

Note 1: If you are an incoming freshman your email account will not be activated until one week from your official class registration.

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7. **A window will appear asking for your student ID number, input your ID into the box and click on "lookup", you will see your Shaw Bear E-mail address, insert this address into Blackboard as shown in step #4 above. If you have any problems accessing your email account please call the Help Desk @ 919-546-8587.**
COURSE DESCRIPTION:

**Course Description:** This course is about structure and function of computers. We will present, as clearly and completely as possible, the nature and characteristics of modern-day computer systems. We believe that learning in computer science and engineering should reflect the current state of the field, as well as introduction the principles that are shaping computing. We also feel that our students should develop an appreciation for the organizational paradigms that that determine the capabilities, performance, and ultimately, the success of computer systems.

We provide the student with the knowledge and skills to understand and use microcomputer systems for professional, home, and small business tasks. Modern computer technology requires professionals of every computing specialty to understand both hardware and software. This study method of the interaction between hardware and software at a variety of levels offers the student an opportunity of understanding the fundamentals framework of modern-day computing. The central ideas in computer organization and design are the same. Thus, the emphasis in this course will be to show the relationship between hardware and software and to focus on the concepts that are the basis for current computers.

**Course Objectives:** The student will demonstrate knowledge of computer organization and architectures thorough discussion, written assignments, and tests about the fundamentals as they relate to contemporary design issues. Each student will become familiar with performance characteristics of computer systems, including processor speed, memory speed, memory capacity, and interconnection data rate, through hands-on activities, and learn computer terminologies.

**Course Topics:**

**Basic functions and facilities of a computer,**
- Introduction to hardware-software interface
- The Von Neumann inheritance
- Functional units and the fetch
- Building computers from logic
  - The control unit
  - The ALU
  - The memory
- The Intel Pentium CPU
- Subroutines
- Simple input and output
- Serial Connections
- Parallel connections
- The memory hierarchy

**Networking and increased complexity**
- The programmer’s viewpoint
- Local area networks
- Wide area networks
- Other networks
Operating systems
Windows XP
Filing systems
Visual output
RISC processors: ARM and SPARC
VLIW processors: EPIC Itanium
Parallel processing

Specific Course Requirements: You will find Blackboard login instruction above and on Shaw University’s main Web page on the lower left side.

SPECIFIC COMPETENCIES:

Student Outcomes/Expectations: students will demonstrate a working knowledge of the basic skills relative to word processing, spreadsheets, database usage, and presentation software through graded projects;

Example: During the semester, the students will demonstrate the following on graded tests:

- Demonstrate their knowledge hardware-software interface.
- Demonstrate knowledge of how to building a computer in the lab
- Describe hardware devices and their uses
- Identify types of systems software and their uses
- Describe networks and define network terms
- Employ a variety of advanced search techniques.
- Use a variety of search tools.

ETHICS RELATED TO THE DISCIPLINE:

Computers have a central and growing role in commerce, industry, government, medicine, education, entertainment and society at large. The software used in this class or any other course at Shaw University is not to be copied for any reason. It resides on a server for copy write protection. Learning and teaching take place best in an atmosphere of intellectual fair-minded openness. All members of the academic community are responsible for supporting freedom and openness through rigorous personal standards of honesty and fairness. Plagiarism and other forms of academic dishonesty undermine the very purpose of Shaw University and diminish the value of education. Specific sanctions for academic dishonesty are online in the University’s publications. This course supports the Student Honor Code.
There are many computer science-related organizations that have codes of ethics. However, most computer scientists are members of the ACM or the IEEE, and so have agreed to be bound by one of the following:

- **The ACM Code of Ethics**
- **The ACM/IEEE Software Engineering Code of Ethics and Professional Practice**
- **The IEEE Code of Ethics**

**ASSIGNMENTS:**

**Assignments and Projects:** *A dated sequenced list of assignments and projects arranged by course section or module must be included.*

**Class Participation:**
The participation of each student in class discussions or in student group activities may be an important element of your evaluation scheme. In addition to your own direct observations, there are ways to measure a student's participation in your distance-learning course. Naturally, these measures are only a part of the larger evaluation process to assess student performance and learning. *Students must communicate with other students in the chat room, students are expected to communicate with the instructor as a learning resource, students must check the course bulletin board frequently for announcements, and students must actively participate in threaded discussion events.*

**Punctuality:** A reiteration and emphasis of certain rules and course expectations should always be included. For example: Class participation is required and you are expected to communicate with other students on team projects, learn how to navigate in Bb, and keep abreast of course announcement. Use the assigned college or university e-mail address as opposed to personal e-mail address. Address technical problems immediately by contacting the HELP desk (919)-546-8587 and observe course netiquette at all times, For example: Always include a subject line before making a comment because; remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails, the use of emoticons might be helpful in some cases.

Attendance and punctuality will be weighed in determining your final grade. Students are expected to attend all class discussion group work and to be on time for the class discussion group. If a student is late to class (15 minutes or more) or leaves class early (15 minutes or more) or missing class, it will have the following adverse effect on his/her grade:

- Grade lowered by one grade if 3 times absent or 6 times late (or leaving class early).
- Student will be withdrawn from the course, or take a grade of "F," if 5 or more times absent or 8 or more times late (or leaving class early).
Students absent the week before a quiz or assignment will be expected to take the quiz with the class. Students will be expected to make up any work they may have missed because of their absence or tardiness.

Use standard fonts.
Do not send large attachments without permission.
Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
Respect the privacy of other class members.

**Discussion Groups should be encouraged:** Examples:

Review the discussion threads thoroughly before entering the discussion. Be a lurker then a discussant.

Try to maintain threads by using the "Reply" button rather than starting a new topic.

Do not make insulting or inflammatory statements to other members of the discussion group. Be respectful of other’s ideas.

Be patient and read the comments of other group members thoroughly before entering your remarks.

Be cooperative with group leaders in completing assigned dated tasks.

Be positive and constructive in group discussions.

Respond in a thoughtful and timely manner.

**Chat are encouraged:** Examples:

Introduce yourself to the other learners in the chat session.
Be polite. Choose your words carefully. Do not use derogatory statements.
Be concise in responding to others in the chat session.
Be prepared to open the chat session at the scheduled time.
Be constructive in your comments and suggestions.

**Web Resources:** This is an examples of mapping student outcomes/expectations to Topical outline:

<table>
<thead>
<tr>
<th>Dates</th>
<th><strong>Summer Session</strong></th>
<th><strong>Action by Instructor</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>05/21</td>
<td>Read in class how to navigate Blackboard. Via Blackboard Course introduction, establish e-mail accounts, and via online bookstore order course package and textbooks. Establish classroom</td>
<td>The Instructor will check to see when every registered student logged into Blackboard. This is a</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>05/22</td>
<td>Discovering Computers will be covered on Blackboard in the Assignment section. Each student will contact a classroom partner via E-mail. The Instructor will check to see when every registered student logged into Blackboard. To do this assignment, use the threaded reflection method of keeping the attendance.</td>
<td></td>
</tr>
<tr>
<td>05/23</td>
<td>Test on Discovering Computers. Instructor will post test from Shelly and Cashman’s textbook test bank.</td>
<td></td>
</tr>
<tr>
<td>05/26</td>
<td>Beginning of &quot;Word&quot; to develop project one. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>05/27</td>
<td>Continuation of the above assignment. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>05/28</td>
<td>Beginning of project two in &quot;Word&quot;. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>05/29</td>
<td>Continuation of the above assignment. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>05/30</td>
<td>Test on projects one and two in &quot;Word&quot;. Instructor will post test from Shelly and Cashman’s textbook test bank.</td>
<td></td>
</tr>
<tr>
<td>06/02</td>
<td>Begin project one in “Excel”. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>06/03</td>
<td>Continuation of the above assignment. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>06/04</td>
<td>Beginning of project two in “Excel”. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>06/05</td>
<td>Continuation of the above assignment. The Instructor will check to see when every registered student logged into Blackboard.</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Assignment Description</td>
<td>Details</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>06/06</td>
<td>Test on projects one and two in “Excel”</td>
<td>Instructor will post test from Shelly and Cashman’s textbook test bank.</td>
</tr>
<tr>
<td>06/09</td>
<td>Beginning of project one in “Access”</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/10</td>
<td>Continuation of the above assignment</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/11</td>
<td>Beginning of project two in “Access”</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/12</td>
<td>Continuation of the above assignment</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/13</td>
<td>Test on projects one and two in “Access”</td>
<td>Instructor will post test from Shelly and Cashman’s textbook test bank.</td>
</tr>
<tr>
<td>06/16</td>
<td>Beginning of project one in “PowerPoint”</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/17</td>
<td>Continuation of the above assignment</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/18</td>
<td>Beginning of project two in “PowerPoint”</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/19</td>
<td>Continuation of the above assignment</td>
<td>The Instructor will check to see when every registered student logged into Blackboard.</td>
</tr>
<tr>
<td>06/20</td>
<td>Test on projects one and two in “PowerPoint”</td>
<td>Instructor will post test from Shelly and Cashman’s textbook test bank.</td>
</tr>
<tr>
<td>06/23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06/24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06/25</td>
<td></td>
<td>All work is to be checked and the student notified of</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>06/26</td>
<td></td>
<td>missing work.</td>
</tr>
<tr>
<td>06/27</td>
<td>Final Exam</td>
<td>Instructor will post final exam, which is a composite of all previous test from Shelly and Cashman’s textbook test bank.</td>
</tr>
<tr>
<td>06/30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LIBRARY:**

Links to library materials (such as electronic journals, databases, interlibrary loans, digital reserves, dictionaries, encyclopedias, maps, and Librarian support) and Internet resources needed by learners to complete online assignments and as background reading must be included in all courses.

Shaw University abides by Section 504 of the Rehabilitation Act of 1973, which stipulates that no student shall be denied the benefits of an education "solely by reason of a handicap." Disabilities covered by law include, but are not limited to, learning disabilities and hearing, sight, or mobility impairments. If you have a documented disability that may have some impact on your work in this class and for which you may require reasonable accommodations, communicate with me or Disabilities Services, so that such reasonable accommodations may be arranged. A statement that any necessary changes to the course syllabus will be sent to the student by e-mail and posted on the bulletin board.

**STUDENT CLASSROOM DECORUM EXPECTATIONS:**

To enhance the learning atmosphere of the classroom, students are expected to dress and behave in a fashion conducive to learning in the classroom. More specifically, students will refrain from disruptive classroom behavior (e.g., talking to classmates on cell phones, Ipods or similar electronic devices; disrespectful responses to teacher instructions; swearing; wearing clothes that distract from academic learning such as, but not limited to, wearing body-revealing clothing and excessively baggy pants; hats/caps, and/or headdress). Students who exhibit the behaviors described above, or similar behaviors will be immediately dismissed from class on the occurrence of the third documented offense. The student will be readmitted to class only following a decision by the department chair. The student may appeal the decision of the department chair to the Dean of the College offering the course, and, subsequently, to the Office of the Vice President for Academic Affairs, and then to the President of Shaw University. The decision of the President will be final. Failure to follow the procedures herein outlined will result in termination of the appeal, and revert to the decision of the department chair.

Each behavior construed by the teacher/professor as not contributing to learning will be recorded, properly documented, and appropriately reported to the student and to the chair.
of the academic department offering the course. The report will be in written form with a copy provided to both the student and the department chair. The faculty member should retain a copy for his/her own records. Additional student behavior codes may be found in Student Affairs especially in the Shaw University Student Handbook.

Web Manager
Instructional Technologist
Shaw University Help Desk Help Desk
919-546-8587, helpdesk@shawu.edu