

**Florida Gulf Coast University, College of Business, ISOM Dept.
ISM 4154 - Systems Integrations Strategies (CRN11063)
Spring 2020**

Instructor	Fan Zhao, Ph.D.		
Credit Hours	3	Course Type	Regular Course
Contact	Email: fzhao@fgcu.edu Phone #: 239-590-7326		
Course Hours	Wed. 1:30-4:15 PM (LH2209)		
Canvas	Course information will be posted on Canvas		
Office Hours	Tue. 10:00 AM -12:00 PM & Wed. 10:30-1:30 PM or by appointment Office: LH 3357		
Textbook	1. Systems Analysis and Design with UNL Version 2.0, by Alan Dennis, Barbara Wixom, and David Tegarden, ISBN: 9781118804674 (fifth edition)		

COURSE OBJECTIVES:

The purpose of this course is to provide a deep understanding of information systems (IS) integration. In organizations today information technology has become a key component in accomplishing strategic and operational goals. Therefore, thousands of different IS are available now. In recent years, many companies required to increase their business process efficiency and effectiveness by integrating their separated information systems throughout the whole organization. As such, most organizations expect their new IT employees (college graduates) to have some basic understanding of information systems integration.

This course is designed to familiarize you with the fundamental concepts and principles of information systems integration. It is targeted for undergraduate students who have database background in information systems. The topics that will be covered include: project management, database management, unified modeling language (UML), enterprise systems, information systems reengineering, software engineering, and information systems integration.

Additionally, this Scholarly-Focused course has been designed to help you become a scholar in the discipline through the production of scholarly work that utilizes writing, critical thinking, and information literacy.

COURSE APPROACH:

A combination of discussion, in-class analysis, and problem solving will be used. PowerPoint slides for each chapter can be found on Canvas — students may print these for use in note-taking.

EQUITABLE CLIMATE:

It is particularly important that a good climate for learning be provided by the instructor and students. Please join with the instructor to help avoid any form of harassment in this class.

Florida Gulf Coast University defines harassment as: "a form of discrimination in which unwelcome, severe, or pervasive speech or actions are directed to individuals or groups of people on the basis of race, color, religion, sex, national or ethnic origin, age, disability, veteran or marital status, sexual orientation, or political views, either directly or indirectly." If a student feels that the instructor or any member of the class has said or done anything that offends someone, s/he should let the instructor know as soon as possible either during or after class (or anonymously with a note under the instructor's office door). Students are also encouraged to report such behavior to the instructor's department chair (Dr. Rajesh Srivastava) and the Dean of the College of Business.

ACADEMIC BEHAVIOR STANDARDS AND ACADEMIC DISHONESTY

FGCU is committed to a policy of honesty in academic affairs. Conduct that comprises a breach of this policy shall result in academic and/or disciplinary action. Academic action affects student assignments, examinations, or grades. Disciplinary action affects student enrollment status.

Violations of student academic behavior standards include:

A. Cheating whereby non-permissible written, visual, or oral assistance including that obtained from another student is utilized on examinations, course assignments, or projects. The unauthorized possession or use of examination or course-related material shall also constitute cheating.

B. Plagiarism whereby another's work is deliberately used or appropriated without any indication of the source, thereby attempting to convey the impression that such work is the student's own. Any student failing to properly credit ideas or materials taken from another has plagiarized.

NOTE: A student who has assisted another in any of the afore-mentioned breach of standards shall be considered equally culpable.

Violation of the Florida Gulf Coast University policy on academic honesty will not be tolerated. If students have questions regarding what constitutes cheating and/or plagiarism, they should consult the Undergraduate Bulletin for definitions and see the instructor if further clarification is needed.

All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the ***Student Code of Conduct*** and ***Policies and Procedures*** sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at <http://studentservices.fgcu.edu/judicialaffairs/new.html>

DISABILITY ACCOMMODATIONS SERVICES

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university's guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please contact the Office of Adaptive Services. The Office of Adaptive Services is located in Howard Hall 137. The phone number is 239-590-7956 or TTY 239-590-7930

STUDENT OBSERVANCE OF RELIGIOUS HOLIDAYS

All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence. In lieu of including the full policy in the course syllabus, provide a link to General Counsel Policies at: <http://www.fgc.edu/generalcounsel/policies-view.asp>

SCHOOL CANCELLATION:

If the University cancels classes for any reason, students should assume that whatever activity is missed will be rescheduled for the next class period.

University Statements

Academic Behavior Standards and Academic Dishonesty

All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the Student Code of Conduct and Policies and Procedures sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at <http://studentservices.fgc.edu/judicialaffairs/new.html>.

Sanctions for academic dishonesty may include receiving an "F" in this course – FGCU may impose additional penalties.

Any incidents of academic dishonesty may be referred to the FGCU Office of Judicial Affairs. Please look up the definition of plagiarism – it includes copying something off the Internet & submitting it as your own work.

Some examples of what is **not acceptable**:

- Working with another student & turning in the same work (e.g. spreadsheet, database, etc.)
- Emailing or posting your work to let someone else "just see how you did it".

- Copying someone's assignment or copying something from a book or the Internet.
- Giving or receiving help from someone (in person, online or on the phone) during an online test.
- Telling someone else what is on a test.

Examples of what is **acceptable**:

- Discussing how to approach an assignment with another student.
- Showing someone where they might have made a mistake on an assignment.
- Asking the professor for help.

University Nondiscrimination Statement

Florida Gulf Coast University is committed to ensuring equity and fairness for all University employees, students, visitors, vendors, contractors and other third parties. As such, the University prohibits discrimination on the bases of race, color, national origin, ethnicity, religion, age, disability, sex (including sexual harassment/assault), gender identity/expression, marital status, sexual orientation, veteran status or genetic predisposition with regard to admissions, employment, programs or other activities operated by the University. This prohibition extends to enforcement of Title IX of the Education Amendments of 1972. Questions or complaints should be directed to the Office of Institutional Equity and Compliance (OIEC). The OIEC's phone number is (239)745-4366; the OIEC email address is OIEC@fgcu.edu.

Disability Accommodations Services

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university's guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please see me or contact the Office of Adaptive Services. The Office of Adaptive Services is located in the Wellness Building. The phone number is 239-590-7956 or Video Phone (VP) 239-243-9453. In addition to classroom and campus accommodations, individuals with disabilities are encouraged to create their personal emergency evacuation plan and FGCU is committed to providing information on emergency notification procedures. You can find information on the emergency exits and Areas of Rescue Assistance for each building, as well as other emergency preparedness materials on the Environmental Health and Safety and University Police Department websites. If you will need assistance in the event of an emergency due to a disability, please contact Adaptive Services for available services and information.

Student Observance of Religious Holidays

All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second

party certification of the reason for the absence.

Mental Health Statement

Counseling and Psychological Services (CAPS) provides free counseling and therapy services (including psychiatry) to all FGCU students. Please walk in to the second floor Howard Hall office any week day between 8:30 and 4:30 to schedule an initial contact appointment. Visit the CAPS website at www.fgcu.edu/caps for more information. CAPS offers a 24/7 Helpline at (239) 745-3277 (EARS).

COURSE ACTIVITIES:

1) First week mandatory assignment (Due by 01/10 midnight on Canvas in the drop box)-- 1%

- Write a brief self-introduction in a Word file and turn it into the Drop Box on canvas. In the introduction you need to include the following information:
 - Your name, education background (such as: high school, or other college), hobby, and anything you want to share with the instructor;
 - List at least *three* of your favorite web sites *and a brief description* on each of them (i.e., what is the web site about and **why it is your favorite**)
 - Your working experiences;
 - Any experiences related to web programming and Database design

2) Individual business analysis report #1 – 10%

Each student will choose a website from three of his/her favorite websites listed in the mandatory attendance assignment, and write a study on a website. (Due by 02/04 midnight and present on 02/05 in class). Report is required to include:

- a) History of the company (0.5-1 page)
- b) Statistics of the website usage, such as how many users per day, how many online transactions per day, etc. (0.5-1 page)
- c) Market share, revenue and profit (0.5-1 page)
- d) Explain how and why the company can make money online (0.5-1 page)
- e) From both your personal and website design perspectives, what are the good things (competitive advantages) and bad things of the website? Please explain each item you listed in details (2-3 pages)
- f) If you were CEO/CIO of the website, please list anything you may want to change or improve in the website to make a better website supporting your business (2-3 pages)
- g) In your conclusion, please predict or forecast the future of this website and the company in three time frames (in 5 years, 10 year and 15 years). (2-3 pages)

- h) Please search journal articles, magazine articles and online articles to support your ideas and conclusions (you need to include at least 5 references in your paper).

Format of your report (Points will be deducted if you did NOT follow the following

Format!):

- Length of the paper: Individual report #1: 8 – 16 pages; Points will be deducted if you don't have enough pages;
- Font: Times New Roman;
- Font Size: 12;
- Double space;
- Required pages NOT including title page, Table of contents, summary page, appendix and reference pages; pictures, charts, and tables embedded in the report should have reasonable sizes (can't not be oversized. Typical height should be less than 2.5". Of course, if you put them in appendix, you can have any size you like).
- References: APA

Presentation requirements:

1. Presentation time: 5 minutes for each student
2. Presentation content: a) Statistics of the website usage
 - b) From both your personal and website design perspectives, what are the good (competitive advantages) and bad of the website?
 - c) Anything you may want to change or improve if you were the CEO
3. Create a PPT file for your presentation

3) Individual business analysis report #2 – 10%

Each student will write an analysis report to compare the User Interfaces of three websites. (Due by 03/31 midnight and present on 04/01 in class). The following is the report structure you need to follow:

The purpose of this project is to apply the knowledge learned from class and academic research papers to analyze the user interface characteristics of actual websites.

You are given an Excel file including three sets of data. Each set of data was a result of website user interface evaluation for a specific website (the website name is anonymous) by previous students. There are total three websites. Your job is to

1. Understand how the websites were evaluated by following the method “**User Interface Testing Checklist**” (Please see following section about this method);
2. Analyze the three sets of data using tools in Excel, discuss the results, and give conclusions and recommendations.

The project includes following sections:

Title of Your Report

Introduction (1-2 paragraphs)

Here you may want to write

1. Objective and goal of this report
2. What you are going to write (main sections).

Contents of this section:

Introduce the concept of User Interface, User Interface testing, and available methods..

Background (1-2 paragraphs)

Here you may want to write

1. Why business analysis is important
2. Any background information about user interface evaluation methods the reader should know

Contents of this section:

Search academic literatures for User Interface testing methods (you need to include and discuss at least 2 references).

Method or Framework of Analysis You Use (1 paragraph)

Here you may want to write

1. Briefly describe the method we adopted in this assignment: User Interface Testing Checklist.

Contents of this section:

Describe the User Interface Testing Checklist method (in Appendix).

Results of Analysis (1 page)

Here you need to do

1. Descriptively analyze the results (use tables and diagrams)
2. Use Charts and Diagrams to show the results (use at least one type of Charts and Diagrams to analyze the data)
3. Explain your findings

Conclusions/Recommendations (1-2 paragraphs)

Here you may want to write

1. Your conclusion or recommendation.
2. Limitations of the analysis if appropriate (such as the criteria in the table that you analyzed is only from one person; it is more likely a subjective result rather than objective, and so on).
3. Further analysis you think necessary.

Recommendations to your report

- Short paragraphs, each of which discusses only one topic that matches to the heading/sub-heading of the section.
- Bulleted and numbers statements
- Tables and charts, instead of paragraphs to explain the whole. Use only short sentences to explain your findings from the tables and charts.

Format of both individual reports (Points will be deducted if you did NOT follow the following Format!):

- Length of the paper: full **2 pages**; Points will be deducted if you don't have enough pages;
- Font: **Times New Roman**;
- Font Size: **12**;
- **Double space**;
- Required pages **NOT including title page, Table of contents, summary page, appendix and reference pages**; pictures, charts, and tables embedded in the report should have reasonable sizes (can't not be oversized. Typical height should be less than 2.5". Of course, if you put them in appendix, you can have any size you like).
- References: APA

Q&A about User Interface Testing Checklist:

Question: how the user interface testing checklist is incorporated into the excel document that shows evaluation method of the criteria. Can you point me into the right direction to how it works and why there are 9 sections and how the numbers work.

Answer: In the excel table, there are 6 rows. Each of them is corresponding to one subsection in the User Interface Testing Checklist. The number in the table you got from me was the average evaluation number for all the questions in each subsection. For example: There are 8 questions under the subsection "Color". If a user gave the following evaluation for each of the questions: 8, 9, 9, 9, 10, 9, 9, 9, when we averaged these 8 numbers, we got 9. This 9 is the final evaluation number of "color" for this website from this user, and this is the number shown in the Excel table.

User Interface Testing Checklist

1. USER INTERFACE

1.1 COLORS

- 1.1.1 Are hyperlink colors standard?
- 1.1.2 Are the field backgrounds the correct color?
- 1.1.3 Are the field prompts the correct color?
- 1.1.4 Are the screen and field colors adjusted correctly for non-editable mode?
- 1.1.5 Does the site use (approximately) standard link colors?
- 1.1.6 Are all the buttons are in standard format and size?
- 1.1.7 Is the general screen background the correct color?
- 1.1.8 Is the page background (color) distraction free?

1.2 CONTENT

- 1.2.1 All fonts to be the same
- 1.2.2 Are all the screen prompts specified in the correct screen font?
- 1.2.3 Does content remain if you need to go back to a previous page, or if you move forward to another new page?
- 1.2.4 Is all text properly aligned?
- 1.2.5 Is the text in all fields specified in the correct screen font?
- 1.2.6 Is all the heading are left aligned
- 1.2.7 Does the first letter of the second word appears in lowercase? Eg:

1.3 IMAGES

- 1.3.1 Are all graphics properly aligned?
- 1.3.2 Are graphics being used the most efficient use of file size?
- 1.3.3 Are graphics optimized for quick downloads?
- 1.3.4 Assure that command buttons are all of similar size and shape, and same font & font size.
- 1.3.5 Banner style & size & display exact same as existing windows
- 1.3.6 Does text wrap properly around pictures/graphics?
- 1.3.7 Is it visually consistent even without graphics?

1.4 INSTRUCTIONS

- 1.4.1 Is all the error message text spelt correctly on this screen?
- 1.4.2 Is all the micro-help text(i.e tool tip) spelt correctly on this screen?
- 1.4.3 Microhelp text(i.e tool tip) for every enabled field & button
- 1.4.4 Progress messages on load of tabbed(active screens) screens

1.5 NAVIGATION

- 1.5.1 Are all disabled fields avoided in the TAB sequence?
- 1.5.2 Are all read-only fields avoided in the TAB sequence?
- 1.5.3 Can all screens accessible via buttons on this screen be accessed correctly?
- 1.5.4 Does a scrollbar appear if required?
- 1.5.5 Does the Tab Order specified on the screen go in sequence from Top Left to bottom right? This is the default unless otherwise specified.
- 1.5.6 Is there a link to home on every single page?
- 1.5.7 On open of tab focus will be on first editable field
- 1.5.8 When an error message occurs does the focus return to the field in error when the user cancels it?

1.6 USABILITY

- 1.6.1 Are all the field prompts spelt correctly?
- 1.6.2 Are fonts too large or too small to read?
- 1.6.3 Are names in command button & option box names are not abbreviations.
- 1.6.4 Assure that option boxes, option buttons, and command buttons are logically grouped together in clearly demarcated areas "Group Box"
- 1.6.5 Can the typical user run the system without frustration?
- 1.6.6 Do pages print legibly without cutting off text?
- 1.6.7 Does the site convey a clear sense of its intended audience?
- 1.6.8 Does the site have a consistent, clearly recognizable "look-&-feel"?
- 1.6.9 Does User cab Login Member Area with both UserName/Email ID ?
- 1.6.9 Does the site look good on 640 x 480, 600x800 etc.?
- 1.6.10 Does the system provide or facilitate customer service? i.e. responsive, helpful, accurate?
- 1.6.11 Is all terminology understandable for all of the site's intended users?

4) Term Project with Chico's -- 64%

Will be graded by your Chico's advisor based on your project completion and meeting attendance.

5) Case study and Presentation -- 5%

Each group will analyze one case from your textbook (instructor will provide cases) by answering the study questions given at the end of the case and discuss any other issues identified by your group. The case analysis provides you an opportunity to apply what you have learned in this course to a real-life scenario/problem. For each case, each group will be given 15 minutes to present the analysis to the class. Since the rest of the class may not have read the case, you are expected to cover the background of the case as part of your presentation. (**Presentation date: 04/15**)

6) Class attendance -- 10%

Each missing attendance costs 2.5 points (up to total 10 points).

COURSE EVALUATION

1. First week Mandatory assignment	1%
2. Individual business analysis reports	20%
3. Term Project	64%
4. Case Study and Presentation (Group Activity)	5%
5. Class attendance	10%
Total	<u>100%</u>

IMPORTANT NOTES:

1. In this course, **No Late assignments** will be accepted. So, do not wait till the last minute to do your assignment because you may encounter problems, such as computer crash or any other problems. **If you turn in your assignment late, you will definitely lose all the points for the assignment. No excuse! Please do NOT send me emails to explain the reasons that cause you sending the projects late after the deadline!**

2. For group projects, **your grade will depend on your group evaluation. For example, if you get 4.5 out of 5 for your group evaluation, which will be $4.5/5=90\%$, and the final grade of your group project is 65, you, individually, will get $65*90%=58.5$ for the group project. Of course, you will get 0 credit if all your group members give you 0 in their group evaluation form.**

3. For group projects, **each student** must complete group evaluation form and turn it in before the deadline! **You will lose all your five points if you didn't turn your own evaluation form in on time (even all the other students in your group might give your full credit for the project contribution)!**

4. When you need to turn in assignments to the assignment drop boxes on Canvas, **Please make sure and double check that you send in the right file. You will get Zero point if you send in the wrong file. No Excuse!** Those drop boxes will disappear after the due date. So, please try to complete your assignments as early as possible.

5. **Doctor Notes** must be presented to the instructor within 7 days after your appointment day with the doctor or the day you are released from your doctor's care. **Sending an email to me and saying that you are sick or feeling bad without a doctor note will not be excused from the absence of your class. You need to turn in a Doctor note for your absence!**

6. Some examples of what is **NOT** acceptable:

- Working with another student & turning in the same work (e.g. spreadsheet, database, etc).
- Emailing or posting your work to let someone else "just see how you did it".

- Copying someone's assignment or copying something from a book or the Internet.
- Giving or receiving help from someone (in person, on line or on the phone) during an online test.
- Telling someone else what is on a test.
- Collaborating on the midterm exam

Examples of what is acceptable:

- Discussing how to approach an assignment with another student.
- Showing someone where they might have made a mistake on an assignment.
- Asking the professor for assistance.

7. Late submissions are NOT accepted. Technology problems (e.g. your computer or Internet is not working; CANVAS is down) are NOT excuses for late or missed assignments.

8. I do recommend that you complete your assignments as early as possible, as least 6 hours before the deadline, so you have time to deal with any technical issues you may encounter. Of Course, if you like to push the assignment to the last minute, it's ok with me. However, **you will take your own risk if you encounter any type of issues** that may cause you sending the assignment in late.

9. Every student is responsible for checking his/her FGCU and CANVAS emails at least once a day. The instructor will respond your emails within 24 hours except weekends and holidays.

10. Any student who may require Adaptive Services, please work with the offices of Adaptive Services, Academic and Event Technology Services, and e-Learning and Academic Web Support as necessary.

11. This course is an FGCU Scholars: Think. Write. Discover course that explicitly engages students in the writing, critical thinking, and information literacy skills of the Quality Enhancement Plan (QEP).

12. **Class attendance is important for this course.** You have 10 points for class attendance. My policy is: each missing class will count 2.5 points, which means if, according to my record, you missed one class during the semester, your class participation will be 7.5 out of 10. And, you would get Zero if you missed 4 or more classes according to my record! **It's your responsibility to sign on the sign sheet each class.** If you missed signing your name on the sheet, even you maybe there, you still will lose 2.5 points for each missing (We normally will have over 30 students in the class, and I can't remember who's there on which day. Therefore, that's the only record for me).

13. Each student MUST complete the final comprehensive exam at the end of the semester. Even the results of this exam will not impact your final grade, **if you missed the exam, you will lose 20 points from your final grade.**

STUDENT LEARNING OUTCOMES

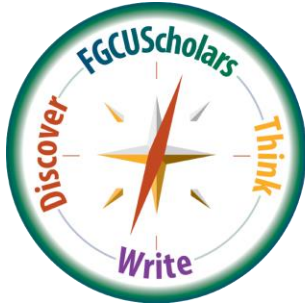
Learning Outcomes	Evaluation and Assessment Methods
Be familiar with Systems Thinking and use it to solve a problem	Discussions, Case study and term project
Be familiar with information systems and technology terminologies	Discussions, Case study and term project
Be familiar with how information technology is used to create competitive advantages by organizations	Discussions, Case study and term project
Be aware of security, privacy, ethical, and social issues	Discussions, Case study and term project
Be familiar with different types of information systems/technologies (such as ERP, SOA, database, etc.) used in business organizations	Quizzes, Exams, Discussions, Case study and term project
Be able to use computer software (Database, project management, UML, SSIS, etc.) to improve productivity	Term project
Be able to use computer program languages (HTML, Java, VB, Java script, PHP, ASP, etc.) to create business information systems	Term project
Be familiar with the concepts of information systems management and development	Discussions, Case study and term project
Be familiar with emerging technologies	Discussions, Case study and term project
Be able to work in a computer supported team environment using collaboration systems	Case study, Term Project

COURSE GRADING

Grade Assignment	Total Points
A	90 -100
B	80-89.99
C	70-79.99
D	60-69.99
F	<60

Temporary Schedule

Date	Topic	Assignments due
01-08	Overview	
01-15	Project Management	
01-22	Project Management & Chico's Presentation	
01-29	Database review (I)	Individual website #1 Report Due by 02/04 midnight
02-05	Database review (II)	Individual website presentation
02-12	UML	
02-19	Software Engineering	
02-26	Interface Design	
03-04	Spring Break!	
03-11	Interface Design	
03-18	Group Presentation (Term Project Part I)	
03-25	Interface Design	Individual website #2 Report Due by 03/31 midnight
04-01	Websites analysis presentation	
04-08	System Integration	
04-15	Textbook Case study Presentation	Textbook case study presentation
04-22	Group Presentations (Term Project Part II)	Term Report & PPT Due 04/21; Group Evaluation Due in class; Complete Comprehensive Exam in class



This Scholarly-Focused Course has been designed to help you become a scholar in the discipline through the production of scholarly work that utilizes writing, critical thinking, and information literacy.

Critical Thinking Outcomes

Definition: Critical thinking is reasonable reflective thinking focused on deciding what to **believe or do**.

Skills and Abilities: The list below contains possible learning outcomes of a critical thinking teaching strategy or activity.

Your critical thinking strategy or activity could allow students to:

1. Judge credibility of sources.	2. Develop and defend a position on an issue.
3. Judge quality of an argument, including the acceptability of its reasons, assumptions, and evidence.	4. Identify conclusions, reasons, overlooked evidence and/or assumptions.
5. Construct appropriate clarifying questions.	6. Formulate hypotheses, plan experiments and judge experimental designs.
7. Define terms in a way appropriate for the context.	8. Access or generate alternatives and select the most appropriate.
9. Gather relevant situational information.	10. Draw conclusions that are supported by facts and evidence.
11. Describe patterns or relationships in large amounts of written and/or visual information.	12. Identify and manage the risks and implications associated with making and implementing decisions.
13. Develop industry/professional standards that may affect their decision making.	14. Analyze a conflict and draw relationships with historical examples.
15. Reflect on the strength and weaknesses of yourself and your team members and suggest ways in which you and others could improve the work of the team in the future.	16. Demonstrate skill in accurately identifying the stereotypes, prejudices, biases and distortions in the thinking of others.
17. Identify a need in the community and actively seek ways to solve the problem.	18. Develop an understanding of their role in serving community; become aware of the context in which they act.
19. Recognize ways they are like and unlike the individuals they work with in a service setting. Identify how those similarities and differences impact their interactions with the community.	20. Thoughtfully analyze and evaluate major alternative points of view.