

Department of Computer Science

CPSC 463 Software Testing

Spring 2023

Ning Chen, Ph.D., Professor

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Office Hours: CS-546, M 11:30 am to 12:30 pm, M 4:00 pm to 5:00 pm, W 11:30 am to 12:30 pm both on Zoom and in-person (Zoom ID: 834712985)

Prerequisites: CPSC 362; Computer Science or Computer Engineering major or minor; or Computer Science or Computer Engineering graduate standing.

Course Description:

Software testing techniques, reporting problems effectively, and planning testing projects. Students apply what they learned throughout the course to a sample application that is either commercially available or under development.

Course Learning Objective:

- Be able to comprehend critical theoretical-level and practical-level concepts in the field Software Testing
- Be able to grow technical competence
- Be able to comprehend and develop professional-quality test cases

Performance Indicators

This course covers the following departmental performance indicators: CODE, COOP, DESC, FB, FDBK, PROC, RESPEC, SPEAK, TEST, WRITE.

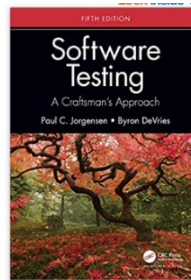
Required:

Chen (Logical Q/A Approach)

Introduction to Software Testing – A Logical Question and Answer Approach (A beta version of a textbook authored by the class instructor - Ning Chen, provided free of charge)



Optional Reading Materials (commercially available): (Please note that this book is an OPTIONAL reading book – It is up to you whether you want to buy it or not)



Software Testing: A Craftsman's Approach, Fifth Edition 5th Edition
by Paul C. Jorgensen (Author), Byron DeVries (Author), published by Auerback Publications, ISBN-10 0367767627, ISBN-13 978-0367767624

Reference Books/Resources (All freely available on the Internet):

Selenium Related:

<https://www.guru99.com/introduction-to-selenium.html#15>

<https://www.browserstack.com/guide/python-selenium-to-run-web-automation-test>

(tested on 3/14/2023)

ChromeDriver - WebDriver for Chrome

<https://sites.google.com/a/chromium.org/chromedriver/#:~:text=ChromeDriver%20%2D%20WebDriver%20for%20Chrome>

Target System:

<https://www.odoo.com/>

vscode (if you prefer)

<https://code.visualstudio.com/>

PyCharm (if you prefer)

<https://www.jetbrains.com/pycharm/>

Pytest

<https://docs.pytest.org/en/7.1.x/>

jest-enzyme

<https://www.npmjs.com/package/jest-enzyme>

SQLite Related

<https://www.sqlite.org/index.html>

A simple SQLite database browser

https://github.com/stonebig/sqlite_bro

<https://pypi.org/project/sqlite-bro/>

VMware Workstation 15.0 or 16.0 Player (Free license)

<https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html>

Note: Students are encouraged to install VMware virtual machine on their own Windows machine as a way to run Ubuntu 20.04 or later as a guest OS.

Schedule (Important: tentative; may change later)

Week	Reading materials	Lecture	Assignment
1 (1/23)	Chen (Logical Q/A Approach) Chapter 1	Week 1 Lectures Orientation and Overview of the course	Discussion (by individual): Acknowledgement Assignment (Due Sunday, 1/29/2023, at 11:59 pm)
2 (1/30)	Chen (Logical Q/A Approach) Chapter 1 Introduction (What is Software Testing?)	Module: Fundamentals - 1(Part 1) Module: Fundamentals - 1 (Part 2)	Discussion Software Testing Jobs in California and Their Required Skill Sets (Due Sunday, 2/5/2023, at 11:59 pm)
3 (2/6)	Chen (Logical Q/A Approach) Chapter 2 Examples of testing activities	Module: Fundamentals - 2	Discussion Review of at least four unit testing frameworks (must include pytest and jest) (Due Sunday, 2/12/2023, at 11:59 pm)

4 (2/13)	Chen (Logical Q/A Approach) Chapter 3 Specification-Based, Unit, Boundary Value Testing	Module: Boundary Value Testing part 1 Boundary Value Testing part 2	Discussion Summarize the boundary value testing (Due Sunday, 2/19/2023, at 11:59 pm)
5 (2/20)	Chen (Logical Q/A Approach) Chapter 4 Specification-Based, Unit, Equivalence Class Testing	Module - Specification-Based, Unit, Equivalence Class Testing Part 1 Specification-Based, Unit, Equivalence Class Testing Part 2	No Assignment
6 (2/27)	https://www.odoo.com/ Odoo Introduction	Module - Module SaaS framework (Odoo as an example)	Discussion Group Progress on Installing Odoo on VMware- Ubuntu (Due Sunday, 3/5/2023, at 11:59 pm)
7 (3/6)	Chen (Logical Q/A Approach) Chapter 5 Specification-Based Unit, Decision Table-Based Testing	Module - Specification-Based, Unit, Decision Table- Based Testing	Discussion Python bubble sort program, segment, and decision graph (Due Sunday, 3/12/2023, at 11:59 pm)
8 (3/13)	Chen (Logical Q/A Approach) Chapter 6 Code-Based, Unit, Path Testing (Or, Structure-Based, Unit, Control Flow Testing)	Module: Path Testing (Part 1) Module: Path Testing (Part 2)	Discussion Python bubble sort pytest test cases (Due Sunday, 3/19/2023, at 11:59 pm)
9 (3/20)	Chen (Logical Q/A Approach) Chapter 6 Code-Based, Unit, Path Testing (Or, Structure-Based, Unit, Control Flow Testing)	Module: Path Testing (Part 3) Module: Path Testing (Part 4)	Discussion on the path testing lectures/textbook (Due Sunday 3/26/2023, at 11:59 pm)
10 (3/27)	Spring Recess		
11 (4/3)	Pytest Python and BDD Tutorial (borrowed from my SaaS modules) Selenium Tutorial	Module Requirements - BDD and User Stories (pytest-bdd) Part 1 Module Requirements - BDD and User	Discussion Behavior- Driven Development testing (Due Sunday 4/9/2023, at 11:59 pm)

		Stories (pytest-bdd) Part 2	
12 (4/10)	Chen (Logical Q/A Approach) Chapter 6 Code-Based Data Flow Testing	Module Data Flow Testing (Part 1) Module Data Flow Testing (Part 2) Module Data Flow Testing (Part 3) Module Data Flow Testing (Part 3 second mp4)	Discussion Data flow testing (Due Sunday, 4/16/2023, at 11:59 pm)
13 (4/17)	Selenium Testing	Module Odoo tutorial: Selenium Testing	Discussion Selenium python testing (Due Sunday, 4/23/2023, at 11:59 pm)
14 (4/24)	Keyword Driven Testing	Module: Keyword Driven Testing	Discussion Keyword- Driven Testing (Due Sunday 4/30/2023, at 11:59 pm)
15 (5/1)	Chen (Logical Q/A Approach) Chapter 8 Integration Testing	Module Integration Testing Part 1 Module Integration Testing Part 2	No Assignment
16 (5/8)	Test Automation	Module - Test Automation (Part 1) Module - Test Automation (Part 2) Module - Test Automation (Part 3)	Group Project Assignment (Due Sunday, 5/14/2023 at 11:59 pm)
17 (5/15)	Final Exam Week	Final Exam	Final exam

All lectures (mp4 and slides) are available on Canvas. The class time will be reserved for small group discussion. Attendance is mandatory.

Per the university policy, Twenty percent or less of class meeting time can be taught in an asynchronous online fashion if needed. If it occurs, an announcement email will be issued in advance.

Grading Policy:

Grading is based on total points earned.

Discussions (on Canvas): 40%

Group project: 10%

Attendance: 10%

Final Exam: 40%

Grades will be assigned at the highest category achieved as follows:

- A+: $\geq 97\%$ of the total points earned
- A: $\geq 93\%$ of the total points earned
- A-: $\geq 90\%$ of the total points earned
- B+: $\geq 87\%$ of the total points earned
- B: $\geq 83\%$ of the total points earned
- B-: $\geq 80\%$ of the total points earned
- C+: $\geq 77\%$ of the total points earned
- C: $\geq 73\%$ of the total points earned
- C-: $\geq 70\%$ of the total points earned
- D: $\geq 60\%$ of the total points earned
- F: $< 60\%$ of the total points earned

Warning: No late assignments will be accepted. There are no make-ups for missed exams. No extra credit will be given.

Discussion Assignments (© 2023 Ning Chen, All Rights Reserved):

Discussion Assignment - Acknowledgment Statement

You must post the following:

I have reviewed the following:

1. CPSC 463 syllabus
2. FAQs related to the discussion or essay assignments
3. <http://www.plagiarism.org/plagiarism-101/what-is-plagiarism>, and I understand the severe consequences resulting from plagiarism and missing deadlines.

(Type your name here)

Discussion Software Testing Jobs in California and Their Required Skill Sets

There are many jobs in the field of software testing in California. Students who may consider seeking those jobs may want to research the job wanted advertisements and analyze the required key skills and qualifications. You are required to post your findings and insights on this topic.

FAQs:

Q. How do I start this discussion?

A. You should search some major job sites (e.g., Monster.com and indeed.com) with some keywords. For example, you may want to use some major keywords such as Software Testing, Quality Assurance (QA), Quality Analyst, Software Engineer, Test Analyst, Software Validation, software engineer, Validation Engineer,...

Q. I do not intend to find a testing job in California. May I substitute California with another region?

A. Yes. Nevertheless, you need to briefly explain your reason at the beginning of your essay.

Q. What should I write?

A. You can write anything as long as it relates to the job descriptions you found and their required skill sets.

Q. Should I also analyze the pay scale of those jobs?

A. Yes, if you can find enough information on the pay scale of the software testing industry.

Q. How do you grade my discussion?

A. The grading of all the discussion assignments is pass or fail (pass – 1 point, fail – 0 point).

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Review of at least four unit testing frameworks (must include pytest and jest)

There are many unit testing frameworks available. Please review at least four (must include pytest and jest) and post your review (or summary).

FAQs:

Q. How do I write my reviews?

A. For example, when you review pytest, write a brief description of it and give some simple usage examples. Basically, you can write whatever you see fit as long as the knowledge you share is related to pytest.

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Summarize the boundary value testing

FAQs:

Q. What should I post for this discussion?

A. You need to summarize your understanding of the boundary value testing in your own words.

Q. Do I have to cover all four cases/forms of boundary value testing?

A. Yes.

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words Covers all 4 cases/forms	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Group Progress on Installing Odoo on VMware-Ubuntu

FAQs:

Q. What should we do for this discussion?

A. Each group (by the group coordinator) needs to post the group's report on installing Odoo on VMware-Ubuntu. One posting from each group.

Q. What should we write in this report?

A. Your posting needs to explain what were the steps your group used to install the required Odoo framework.

Q. Anything else (since we need to meet the 1000-word requirement too)?

A. You can also write anything you see fit (for example, any difficulties encountered and their fix/workaround).

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words Required installation steps (or experiences)	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Python bubble sort program, segment, and decision graph

In this discussion, you need to do the following:

- Study <https://www.w3resource.com/python-exercises/data-structures-and-algorithms/python-search-and-sorting-exercise-4.php>
- Draw its program graph, segment graph, and decision graph
- My closing thoughts and references

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	Must have three graphs (program, segment, and decision)	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts (minimum 200 words)	There is no section labeled My Closing Thoughts with minimum 200 words
References	At least two references	Does not meet the minimum

Discussion on the path testing lectures/textbook

FAQs:

Q. What should I do for this discussion?

A. You need to review all lectures (mp4) of the path testing and Chapter 6 (Code-Based, Unit, Path Testing - Or, Structure-Based, Unit, Control Flow Testing) authored by Ning Chen.

Q. What should I write in this discussion?

A. You need to write at least two sections: Summary of the lectures/textbook chapter and My Closing Thoughts. (More sections are welcome too.)

Q. Anything else (since we need to meet the 1000-word requirement too)?

A. You can also write anything you see fit.

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Python bubble sort pytest test cases

In this discussion, you need to do the following:

- Study <https://www.w3resource.com/python-exercises/data-structures-and-algorithms/python-search-and-sorting-exercise-4.php>
- Design and run two test cases (must use pytest, NOT unittest)
- Must use pytest-cov (to show test coverage)
- Must attach a short mp4 (run the test and record the screen) that proves your work
- My closing thoughts and references

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	Must have/do items a,b,c,d,e (see above)	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts (minimum 200 words)	There is no section labeled My Closing Thoughts with minimum 200 words
References	At least two references	Does not meet the minimum

Discussion Selenium python testing

FAQs:

Q. What should I do for this discussion?

A. You need to review 1. The course lecture (Module Odoo tutorial – Selenium Testing ppt and mp4). 2. Search and read some Selenium tutorials on the Internet.

Q. What should I write in this discussion?

A. You need to write at least two sections: Summary of the Selenium (tools, community, technologies, usages, job markets, whatever you see fit) and My Closing Thoughts. (More sections are welcome too.)

Q. Anything else (since we need to meet the 1000-word requirement too)?

A. You can also write anything you see fit.

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion on the Data flow testing lectures/textbook

FAQs:

Q. What should I do for this discussion?

A. You need to review all lectures (mp4) of the path testing and Chapter 7 (DU Testing and Slice-Based Testing) authored by Ning Chen.

Q. What should I write in this discussion?

A. You need to write at least two sections: Summary of the lectures/textbook chapter and My Closing Thoughts. (More sections are welcome too.)

Q. Anything else (since we need to meet the 1000-word requirement too)?

A. You can also write anything you see fit.

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Behavior-Driven Development testing

In this discussion, you need to do the following:

a. Make sure you review the lectures of

Module Requirements - BDD and User Stories (pytest-bdd) all parts

b. Study three files:

cucumbers.py, test_unit_basic.py and unit_basic.feature

You can find the source of cucumbers.py at <https://github.com/AndyLPK247/behavior-driven-python/blob/master/cucumbers.py>

unit_basic.feature at https://github.com/AndyLPK247/behavior-driven-python/blob/master/pytest-bdd/tests/features/unit_basic.feature

test_unit_basic.py at https://github.com/AndyLPK247/behavior-driven-python/blob/master/pytest-bdd/tests/step_defs/test_unit_basic.py

c. Play it on your local computer – make sure it does run (`$pytest ./test_unit_basic.py`)

Note: You can change the folder/file location if needed. Basically, you need to duplicate this bdd example on your local computer (and make sure it does run).

d. Must attach a short mp4 (run the test and record the screen) that proves your work

e. Summarize/explain this bdd example and include “my closing thoughts and references”

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	Must have/do items a, b, c, d, and e (see above) Make sure you do summarize/explain this bdd example in your own way	Does not meet the minimum (minimum 1000 words including My Closing Thoughts and References) No mp4 file No summary or explanation of the bdd example
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Discussion Keyword-Driven testing

FAQs:

Q. What should I do for this discussion?

A. You need to do research on the subject of Keyword-Driven testing. Just search this term on the Internet and read.

Q. What should I write in this discussion?

A. You need to write at least two sections: Summary of what you have read and My Closing Thoughts. (More sections are welcome too.)

Q. Anything else (since we need to meet the 1000-word requirement too)?

A. You can also write anything you see fit.

Q. What is the grading rubric for the discussion assignment?

A. The grading rubric for all discussion assignments is:

Category	Pass (1 point)	Fail (0 point)
Minimum Effort (You can write whatever you see fit)	At least 1000 words	Does not meet the minimum
Have a section labeled My Closing Thoughts	You MUST have a section labeled My Closing Thoughts	There is no section labeled My Closing Thoughts
References	At least two references	Does not meet the minimum

Group Project: © Ning Chen 2023

Unit Testing and Keyword-Driven Testing of Odoo 15

Q. What is the group project?

A. The group project has two parts:

Part A: The Python unit testing of Odoo version 15, module om_hospital

Part B: The Keyword-Driven testing of Odoo version 15, module om_hospital

Q. How do we install Odoo version 15?

A. Your group may want to read several tutorials:

<https://linuxhint.com/install-odoo-15-ubuntu-22-04/>

<https://linuxize.com/post/how-to-install-odoo-15-on-ubuntu-20-04/>

<https://www.rosehosting.com/blog/how-to-install-odoo-15-on-ubuntu-20-04/>

<https://www.candidroot.com/blog/our-candidroot-blog-1/post/how-to-install-odoo-15-in-ubuntu-18-04-lts-93>

Q. Do we have to use ubuntu?

A. Yes. I can only support Ubuntu (22.04 LTS). (If your group decides to use Windows OS, I can accept it but am not able to support your issues).

Q. Where to find the free Odoo 3rd party module om_hospital?

A. https://apps.odoo.com/apps/modules/15.0/om_hospital/

PART A (Python Unit Testing)

Q. How many unit tests should we develop?

A. You need to develop at least 5 unit test cases for the module om_hospital.

Q. Where do we start?

A. I think you need to play Odoo first.

Q. How do I play?

A. If you prefer, you can set up a trial account (free, no credit card) at <https://www.odoo.com/trial>

You can play the fleet module (Odoo calls it fleet app). You won't find the om_hospital module there (since it is a 3rd party module).

Q. How do I start Part A (Python unit testing)?

A. To run python unit testing, you need to have an Odoo development system (no way to get around it). Your group needs to install the Odoo 15 (open source, community version) on your computer. It is a bit tedious but achievable.

Q. Can I read some Odoo testing documentation?

A. Please read <https://www.odoo.com/documentation/15.0/developer/reference/backend/testing.html#testing-js-code>

Q. I visited the link and found three kinds of tests (Python unit tests, JS unit tests and Tours/Integration Testing). Do I need to do all three kinds?

A. No. We only do the Python unit tests (maybe, if more people want, we can add Part C of the group project to cover the other two kinds).

Q. Any odoo python unit testing example?

A. I have posted some lectures on this. Please review. It is not that hard. Most Odoo SA modules (if not all) come with unit test cases. You may want to study them a bit. How to run test cases is explained in the link <https://www.odoo.com/documentation/15.0/developer/reference/backend/testing.html#testing-js-code>

Part B (The Keyword-Driven testing)

Q. How about Part B (The Keyword-Driven testing)?

A. Your group needs to write five test programs/test cases (in Python) that test the targeted site (Odoo) via a browser.

Q. Any starting point?

A. Please review my lectures (posted already). You may also to read the following:

Step 1: There are many good Selenium tutorials on the Internet. Maybe you want to read this one:

<https://www.browserstack.com/guide/python-selenium-to-run-web-automation-test>

Step 2: Robotframework

See

<https://www.browserstack.com/guide/robot-framework-and-selenium-tutorial>

Q. Do I need to use Python?

A. Yes.

Q. Do I have to use Odoo as the targeted system (system under test)?

A. Yes.

Q. Do I need to have three Robotframework Selenium test cases?

A. Yes.

Q. Still not that clear! Can you give an example of some Robotframework Selenium test cases?

A. One example is

Test case 1: Odoo login (you need to log into Odoo to do other tests anyway)

Test case 2: a positive test case of om_hospital

Test case 3: a negative test case of om_hospital (modify om_hospital source code in some way to create a programming bug)

Test case 4: up to you

Test case 5: up to you

Q. What should I submit for the group project?

A. For the group project, each group, via the group coordinator, needs to submit one copy of the following:

Part A: Unit Testing - five files: pdf, ppt, and mp3 (mp4 is fine), demo mp4, source code file (zip)

Part B: Client-Side Testing (Selenium Keyword Testing) – five files: pdf, ppt, and mp3 (mp4 is fine), demo mp4, source code file (zip)

where

ppt, mp3(mp4 if you prefer) is a 20 minutes presentation of Part A/B

pdf is a report of Part A/B (title page, introduction, whatever sections you see fit, conclusion, references)

zip contains all your test code

demo mp4 proves that your test cases are all successful (or do catch bugs).

Q. What file name convention we should use?

A. You should use the following file names:

GroupNumberPartAPresentation.(pdf, pptx, mp3 or 4) - three files

GroupNumberPartADemo.(zip, mp4) - two files

GroupNumberPartBPresentation.(pdf, pptx, mp3 or 4) - three files

GroupNumberPartBDemo.(zip, mp4) - two files

Additional Information:

Student Civility:

Please see UPS 100.006

(http://www.fullerton.edu/senate/publications_policies_resolutions/ups/UPS%20100/UPS%20100.006.pdf)

Students with Special Needs:

Please visit Disability Support Services (<https://www.fullerton.edu/dss/>)

Academic Dishonesty Policy:

Please see UPS 300.021

(https://www.fullerton.edu/senate/publications_policies_resolutions/ups/UPS%20300/UPS%20300.021.pdf)

Violations of UPS300.021 will result in an F grade.

For your convenience, parts of the UPS 300.021 are shown below:

"Academic dishonesty includes such things as cheating, inventing false information or citation, plagiarism, and helping someone to commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill, which he/she, in fact, does not possess.

Cheating is defined as the act of obtaining or attempting to obtain credit for work by the use of any dishonest, deceptive, fraudulent, or unauthorized means. Examples of cheating include, but are not limited to, the following: using notes or aids or help of other students on tests and examinations in ways other than those expressly permitted by the instructor, plagiarism as defined below, tampering with grading procedures, and collaborating with other on any assignment where such collaboration is expressly forbidden by an instructor. Violation of this prohibition of collaboration shall be deemed an offense for the person or persons collaborating on the work, in addition to the person submitting the work.

Plagiarism is defined as the act of taking the work of another and offering it as one's own without giving credit to that source. When sources are used in a paper, acknowledgment of the original author or source must be made through appropriate references and, if directly quoted, quotation marks or indentations must be used"

Emergency Preparedness:

Please visit the Emergency Preparedness website

(<https://police.fullerton.edu/programs/prepare/>).

CSUF Police Department

Dispatch:

([657\) 278-2515](tel:6572782515))

Hours: 24/7

Withdrawal of the course:

Please see Withdrawal FAQs (<http://records.fullerton.edu/services/withdrawal.php>).

Withdrawal deadline: Please see the above Withdrawal FAQs.