

3 Credit Hours
 College of Engineering
 Department of Computer Science & Engineering
Course Prerequisites: COP 2513



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|------------------|--|-------------------------|---------------------|
| Instructor Name: | Carol Hoeke, PhD | Semester/Term & Year | Fall 2020 |
| Office: | Blackboard, by appointment | Class Meeting Days: | Asynchronous Online |
| Phone Number: | (321) 276-5471 | Class Meeting Time: | Asynchronous Online |
| E-Mail: | Hoeke@USF.edu | Class Meeting Location: | Canvas |
| Office Hours: | W: 1900 – 2100 via Blackboard | Delivery Method: | Online Modules |

I. University Course Description

This course examines the activities related to the analysis, design, implementation and management of process automation within an organization, and presents emerging industry trends. Covers concepts essential to the requirements, design, development, testing, and implementation of process automation within the business context. Addresses advantages, disadvantages, current capabilities, documentation, development approaches, testing, implementation, and maintenance.

II. Course Prerequisites

As a special topics course, the pre-requisite for Process Automation is successful completion of COP 2513:

III. Course Objectives

At the successful completion of the course, students should accomplish the following:

- Basic skills to implement process automation in attended and unattended modes
- The different types of process automation
- Feasibility study components for process automation initiatives
- The plans and policies for process automation governance, maintenance, and operations
- Scenarios which require additional functionality, including opportunities for Artificial Intelligence and Machine Learning

IV. Student Learning Outcomes

At the successful completion of the course, students will be able to:

- Perform common process automation tasks such as recording and replaying tasks, data manipulation, interaction with UI components, orchestration of multiple tasks, monitoring events, and triggering actions
- Describe the typical responsibilities within the management and operations domains
- Perform feasibility studies to determine the applicable approach for process automation
- Develop and apply a prototype solution for a typical process automation problem set
- Identify situations where a process automation solution may provide a feasible solution and propose a set of objectives to determine success

V. Required Texts and/or Readings and Course Materials

(Tripathi, 2018) Tripathi, Alok Mani, **Learning Robotic Process Automation**, 2018 Packt Publishing, ISBN-13 978-1-78847-094-0

Available for free through the USF Library: <https://ebookcentral-proquest-com.ezproxy.lib.usf.edu/lib/usf/detail.action?docID=5332142>.

UIPath Studio Community Cloud [Free version] https://www.uipath.com/start-trial?utm_source=Captera&utm_medium=cpc&utm_campaign=CapteraPPC&capterra_visitors=capterra

VI. Supplementary (Optional) Texts and Materials

All supplemental materials will be provided on Canvas for the students.

VII. Grade Categories and Weights

Your final course grade is a weighted average of the grades earned on all graded material. The weights for the different categories are:

| Assessment Category | Percent of Final Grade |
|---------------------|------------------------|
| Online Discussions | 10% |
| Assignments | 20% |
| Quizzes | 15% |
| Midterm Exam | 25% |
| Final Exam | 30% |
| Total | 100% |

VIII. Grading Scale

Final Letter grades are as follows – numeric grades are TRUNCATED:

| Grading Scale (%) | | | |
|-------------------|----|----------|----|
| 97-100 | A+ | | |
| 94-96.9 | A | 74-76.9 | C |
| 90-93.9 | A- | 70-73.9 | C- |
| 87-89.9 | B+ | 67-69.9 | D+ |
| 84-86.9 | B | 64-66.9 | D |
| 80-83.9 | B- | 60-63.9 | D- |
| 77-79.9 | C+ | 0 – 59.9 | F |

IX. Grade Dissemination

I utilize the Canvas system to record your grades. You can check on Canvas for all of your current grades.

X. Course Policies: Grades

A. Policy Regarding Contesting a Grade:

You have one week (seven calendar days) following the posting of a grade *AFTER the due date and release/unmuting of the grades after evaluation of the automated grading results* to contest the grade. If the grade is not contested by 5 pm (Eastern) on the fifth University business day, then the grade posted stands as final. For purposes of contesting a grade, an email to the email address listed above with a subject line of CONTESTING MY GRADE and a body with your name, the course, the assignment, and a brief explanation of why you are contesting the grade shall constitute notice of your intention to contest a grade.

B. Late Work Policy:

Submissions will be made via Canvas, and the time stamp provided by Canvas utilized as the official recorded time of submission. I do not allow late work to be submitted unless there is prior approval by me based on special circumstances.

- Failure to submit an assignment when due results in an automatic grade of zero (0) on that assignment.
- I reserve the right to require submission of an alternate assignment in lieu of the originally assigned work in the event of an prior approved change to due date.

- I reserve the right to request proper documentation of “emergencies” offered for late work. This may include police reports, statement of a supervisor, note from a physician, hospital release papers, or other official sources. Please contact me before submitting such information and if requested please redact any personal information prior to submission.
- No assignments will be accepted after the last day of class. NO EXCEPTIONS!!!

C. Extra Credit Policy:

There are no opportunities for extra credit: please do not ask!

D. Grades of "Incomplete":

The current university policy concerning incomplete grades is followed in this course. **For USF Tampa undergraduate courses:** An “I” grade may be awarded to a student only when a small portion of the student’s work is incomplete and only when the student is otherwise earning a passing grade. The time limit for removing the “I” is to be set by the instructor of the course. For undergraduate students, this time limit may not exceed two academic semesters, whether or not the student is in residence, and/or graduation, whichever comes first. For graduate students, this time limit may not exceed one academic semester. “I” grades not removed by the end of the time limit will be changed to “IF” or “IU,” whichever is appropriate. [<http://ugs.usf.edu/policy/IGradePolicy.pdf>]

For USF Tampa graduate courses: An Incomplete grade (“I”) is exceptional and granted at the instructor’s discretion only when students are unable to complete course requirements due to illness or other circumstances beyond their control. The course instructor and student must complete and sign the “I” Grade Contract Form that describes the work to be completed, the date it is due, and the grade the student would earn factoring in a zero for all incomplete assignments. The due date can be negotiated and extended by student/instructor as long as it does not exceed two semesters for undergraduate courses and one semester for graduate courses from the original date grades were due for that course. An “I” grade not cleared within the two semesters for undergraduate courses and one semester for graduate courses (including summer semester) will revert to the grade noted on the contract. [http://www.grad.usf.edu/inc/linked-files/I_Grade_Policy_and_Procedure.pdf]

E. Essay Commentary Policy:

Commentary on essays will be delivered in written format, in the comment section of the essay grading area.

F. Group Work Policy:

Everyone must take part in a group project when included in the course assignment content. All members of a group will receive the same score; that is, the project is assessed, and everyone receives this score. However, that number is only 90% of your grade for this project. The final 10% is individual and refers to your teamwork. Every person in the group will provide the instructor with a suggested grade for every other member of the group, and the instructor will assign a grade that is informed by those suggestions. Once formed, groups cannot be altered or switched, except for reasons of extended hospitalization.

G. Final Examinations Policy:

All final exams are to be scheduled in accordance with the University’s final examination policy.

XI. Course Policies: Technology and Media

A. Email:

I use both the University email system and the Canvas messaging system. I will respond to your email to the address it was sent from and from the system it was sent from (if you email me from within Canvas, I will respond to Canvas, if you email me from traditional email, I will respond with traditional email). For class announcements I will send a Canvas group email via Announcements. I will be checking my email frequently and you can expect a response within 48 hours (holidays excluded).

B. Canvas:

I utilize Canvas in this course to assign all of the course work and for you to submit your solutions. I will also be utilizing it to communicate with you and to provide you with your current grade. It is recommended that you check it frequently. If you need help learning how to perform various tasks related to this course or other courses being offered in Canvas, please consult the Canvas help guides. You may also contact USF's IT department at (813) 974-1222 or help@usf.edu.

C. Course Recording:

In this class, software will be used to record live class weekly office hours and group discussions. As a student in this class, your participation in live class discussions will be recorded. These recordings will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Please discuss this option with your instructor. I alert all participants prior to activating capture of weekly office hours discussion and review sessions in electronic format via Blackboard on Canvas.. Therefore, student voices may be heard and comments displayed in the captured content. Specific individual grading content IS NOT CAPTURED.

XII. Course Policies: Student Expectations

A. Academic Integrity of Students:

Academic integrity is the foundation of the University of South Florida System's commitment to the academic honesty and personal integrity of its university community. Academic integrity is grounded in certain fundamental values, which include honesty, respect, and fairness. Broadly defined, academic honesty is the completion of all academic endeavors and claims of scholarly knowledge as representative of one's own efforts. The final decision on an academic integrity violation and related academic sanction at any USF System institution shall affect and be applied to the academic status of the student throughout the USF System, unless otherwise determined by the independently accredited institution. [<http://ugs.usf.edu/policy/AcademicIntegrityOfStudents.pdf>]

B. Disruption to Academic Process:

Disruptive students in the academic setting hinder the educational process. Disruption of the academic process is defined as the act, words, or general conduct of a student in a classroom or other academic environment which in the reasonable estimation of the instructor: (a) directs attention away from the academic matters at hand, such as noisy distractions, persistent, disrespectful or abusive interruption of lecture, exam, academic discussion, or general University operations, or (b) presents a danger to the health, safety, or well-being of self or other persons.

[<http://ugs.usf.edu/policy/DisruptionOfAcademicProcess.pdf>]

C. Student Academic Grievance Procedures:

The purpose of these procedures is to provide all undergraduate and graduate students taking courses within the University of South Florida System an opportunity for objective review of facts and events pertinent to the cause of the academic grievance. An "academic grievance" is a claim that a specific academic decision or action that affects that student's academic record or status has violated published policies and procedures, or has been applied to the grievant in a manner different from that used for other students. [<http://ugs.usf.edu/policy/StudentAcademicGrievanceProcedures.pdf>]

D. Disability Access:

Students with disabilities are responsible for registering with Students with Disabilities Services (SDS) in order to receive academic accommodations. SDS encourages students to notify instructors of accommodation needs at least 5 business days prior to needing the accommodation. A letter from SDS must accompany this request. [<http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-0-108.pdf>]

E. Sexual Misconduct/Sexual Harassment Reporting:

USF is committed to providing an environment free from sex discrimination, including sexual harassment and sexual violence ([USF System Policy 0-004](#)). The USF Center for Victim Advocacy and Violence Prevention is a confidential resource where you can talk about incidents of sexual harassment and gender based crimes including sexual assault, stalking, and domestic/relationship violence. This confidential resource can help you without having to report your situation to either the Office of Student Rights and Responsibilities (OSSR) or the Office of Diversity, Inclusion, and Equal Opportunity (DIEO), unless you request that they make a report. Please be aware that in compliance with Title IX and under the USF System Policy, educators must report incidents of sexual harassment and gender-based crimes including sexual assault, stalking, and domestic/relationship violence. If you disclose any of these situations in class, in papers, or to me personally, I am required to report it to OSSR or DIEO for investigation. Contact the USF Center for Victim Advocacy and Violence Prevention: (813) 974-5757. [<http://regulationspolicies.usf.edu/policies-and-procedures/pdfs/policy-0-004.pdf>]

F. Attendance Policy:

The student is expected to fully participate in and contribute to all aspects of the class. For this reason, attendance is required for this course. I will allow two (2) unexcused absences before I start deducting points from your “Attendance & Participation” grade. In order for an absence to be “excused”, proper documentation must be provided, and if the absence is known in advance by the student, then they must inform the instructor in advance. [<http://ugs.usf.edu/policy/GeneralAttendance.pdf>]
[<http://ugs.usf.edu/policy/ExcusedAbsencesAndMakeUpWork.pdf>]

G. Civility:

My commitment is to create a climate for learning characterized by respect for each other and the contributions each person makes to class. I ask that you make a similar commitment.

H. Professionalism Policy:

Per university policy and classroom etiquette; mobile phones, iPods, etc. **must be silenced** during all classroom and lab lectures. Those not heeding this rule will be asked to leave the classroom/lab immediately so as to not disrupt the learning environment. Please arrive on time for all class meetings. Students who habitually disturb the class by talking, arriving late, etc., and have been warned may suffer a reduction in their final class grade.

I. End of Semester Student Evaluations:

All classes at USF make use of an online system for students to provide feedback to the University regarding the course. These surveys will be made available at the end of the semester, and the University will notify you by email when the response window opens. Your participation is highly encouraged and valued.

J. Turnitin.com:

In this course, *turnitin.com* is utilized. Turnitin is an automated system which instructors may use to quickly and easily compare each student's assignment with billions of web sites, as well as an enormous database of student papers submitted via the University electronic submission system that grows with each submission. Accordingly, you will be expected to submit all essay assignments in electronic format. After the assignment is processed, as instructor I receive a report from *turnitin.com* that states if and how another author's work was used in the assignment. For a more detailed look at this process visit <http://www.turnitin.com>. Essays are due at *turnitin.com* via Canvas assignment submission and are not accepted in any other form.

K. The Writing Studio:

The Writing Studio is a free resource for USF undergraduate and graduate students. At the Writing Studio, a trained writing consultant will work individually with you, at any point in the writing process from brainstorming to editing. Appointments are recommended, but not required. For more information or to make an appointment, visit <http://www.lib.usf.edu/writing/>, stop by LIB 2nd Floor, or call 813-974-8293.

L. Campus Emergencies:

In the event of an emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and email messaging and/or an alternate schedule. It's the responsibility of the student to monitor the Canvas site for each class for course specific communication, and the main USF, college, and department websites, emails, and MoBull messages for important general information.

M. Covid-19 Procedures

All students must comply with university policies and posted signs regarding COVID-19 mitigation measures, including wearing face coverings and maintaining social distancing during in-person classes. Failure to do so may result in dismissal from class, referral to the Office of Student Conduct and Ethical Development, and possible removal from campus.

Additional details are available on the University's Core Syllabus Policy Statements page:

<https://www.usf.edu/provost/faculty/core-syllabus-policy-statements.aspx>

XIII. Course Schedule

The following is the tentative schedule for this course and it is subject to change. For a listing of assignments, please see the “Assignments” or “Calendar” section of Canvas. That being said, I will try my best to keep to it. If there are any changes to this schedule they will be reflected on this course’s Canvas page.

| WEEK NO. | MODULE | GRADED ASSIGNMENT | READING | NOTES |
|----------|---|--|---------------------------|---|
| 1 | (0) Getting Started | • <i>First Day Attendance</i> | Preface Online Reading | *8/28 End of Drop Add Period |
| 2 | (1) What is Process Automation | • <i>Quiz</i> • <i>Discussion</i> | Chapter 1 | |
| 3 | (2) What is the value of Process Automation | • <i>Quiz</i> • <i>Assignment</i> | Online Reading | Installation of UiPath and configuration |
| 4 | (3) Getting Started with UiPath – Record and Play | • <i>Assignment</i> • <i>Discussion</i> | Chapter 2 | |
| 5 | (4) Sequence, Flowchart, and Control Flow | • <i>Assignment</i> • <i>Discussion</i> | Chapter 3 | |
| 6 | (5) Data Manipulation | • <i>Quiz</i> • <i>Assignment</i> | Chapter 4 | |
| 7 | (6) Business Implications of Process Automation | • <i>Quiz</i> • <i>Discussion</i> | Online Reading | |
| 8 | (7) Midterm Prep | <None> | N/A | *Midterm Grades Due |
| | Midterm Exam (Modules 1–7): | ONLINE PROCTORED | via Canvas | Saturday, Oct 17th between 09:00 am and 3:00 pm |
| 9 | (8) Taking Control of the Controls | • <i>Assignment</i> • <i>Discussion</i> | Chapter 5 | |
| 10 | (9) Application Plugins and Extensions | • <i>Quiz</i> • <i>Assignment</i> | Chapter 6 | *8/31 Last day to withdraw with a W |
| 11 | (10) Intelligent Automation | • <i>Quiz</i> • <i>Discussion</i> | Online Reading | |
| 12 | (11) Handling User Events and Assistant Bots | • <i>Assignment</i> | Chapter 7 | |
| 13 | (12) Exception Handling, Debugging, and Logging | • <i>Quiz</i> • <i>Assignment</i> | Chapter 8 | |
| 14 | (13) Managing and Maintaining the Code | • <i>Assignment</i> • <i>Discussion</i> | Chapter 9 | |
| 15 | (14) Deploying and Maintaining the Bot | • <i>Quiz</i> [DUE WED] | Chapter 10 | *Dec 03 – Dec 04 Reading Days |
| 16 | (15) Final Exam Prep | <None> | N/A | |
| | Final Exam (Modules 8-16): | On Campus | N/A | Sunday, Dec 6th Hours to be announced |

XIV. Important Dates to Remember

Drop/Add Deadline: 08/28

Mid-Term Examination: 10/10 (9:00 am – 3:00 pm) REMOTE

Withdrawal Deadline: 10/31

Final Examination: 12/06 (10:00 am – 12:00 pm – TO BE CONFIRMED) ON CAMPUS or REMOTE

A. Religious Observances:

All students have a right to expect that the University will reasonably accommodate their religious observances, practices and beliefs. If you observe religious holidays, you should plan your allowed absences to include those dates. [<http://ugs.usf.edu/policy/ReligiousDays.pdf>]

XV. The Last Word

I'm here to help you do well in this course. If you need any help on the material or assignments, please come to office hours or email me before you get behind. If you have any other problems that interfere with your academic work, see me as soon as possible so we can look for a solution.