Course Syllabus

MTEC1003-OL04 — Media Computation Skills Lab

Prof. Louis Goldford (version #1, revised on 8/14/20)

View the online version of this syllabus at the Course Website.

CONTENTS

I. Essential Course + Contact Information

Course Number: MTEC1003
Semester: Fall 2020
Section: OL04 (28059)
Location + Time: Mondays 2:30-5:00 PM [ONLINE]

Professor: Louis Goldford
Email: LGoldford@citytech.cuny.edu

Office Hours: by virtual appointment. ***Email me to set up a time.***
Office Location: [ONLINE]
Course Website: https://einbahnstrasse.github.io/Goldford-MTEC1003-OL04/
Course Slack: http://goldford-mtec1003.slack.com/

II. Course Description

MTEC1003 examines the fundamental topics, tools, skills, and best practices that support creative programming. At its core we ask how the user can gain finer control over their computer and make better use of it in their personal practice. Through our weekly lab assignments, demonstrations, and supplementary resources, students will gain fluency with the tools necessary to construct websites, using essential front-end technologies such as HTML/CSS and JavaScript. Additionally, students will implement fundamental programming paradigms in JavaScript and Python, and will harness the computer's powerful administrative functionality on the Unix command line. We will organize our workflow intelligently with source code management (i.e. Git). Our work prepares the student for subsequent classes in the MTEC course rotation. Time permitting, we will also touch on the basics of data mapping for artistic purposes.

In this semester's online version of MTEC1003, and in lieu of a physical classroom, we will rely on a few of the interactive coding tools available to us as distant learners — for example, some of our tutorials may be completed on Google Colaboratory, and we will utilize Slack for some course communication.

Students will therefore be required to (1) join our course's Slack channel, (2) maintain a public *GitHub* user account for all submitting assignments, and (3) download/install all required software on their own computer.

III. Course Goals

1. Introduce the Unix command line, JavaScript, HTML, CSS, and Python.
2. Define and execute basic control flow operations: functions + function calls, loops, conditional statements, etc.
3. Utilize version control for intelligent backup, with special emphasis on Git.
4. Submit all course assignments through *GitHub*.
5. Create personal web content using HTML, CSS, and JavaScript, using *GitHub Pages*.

IV. Learning Outcomes

By the end of the course students will be able to:

- **Build + Execute** simple programs in JavaScript and Python.
- **Read and understand** documentation and resources related to our programming languages.
- **Interface** with (1) your computer's administrative capabilities, (2) Git, and (3) Python, using the Unix command line.
- **Understand** fundamental programming operations (i.e. those listed in III. Course Goals, above).
- **Establish** a creative coding practice that includes a logical debugging process.
- **Organize** all developmental work using version control (Git) via a personal _GitHub_ account.
- **Create + Publish** an original website from basic HTML/CSS formatting and JavaScript.

V. Required Software + Other Resources

See the SOFTWARE TAB on our Course Website for download and documentation links.

- Terminal (macOS) or an acceptable Terminal Emulator (Windows)
- an acceptable Text Editor (e.g. Atom, Sublime Text 3, or Visual Studio Code)
- Google Chrome
- Git (and Homebrew for Git installation)
- a public account on *GitHub.com*
- Python 3

VI. Expectations

VI. Part I. General Expectations

- **Arrive on time** to all online course sessions. *See Attendance + Participation Policy below.*
- Setup + maintain a public *GitHub* account, and report your username to the instructor for grading at the start of the semester.
- Spend **1-2 additional hours a week** *(outside of class)* on the timely completion of our lab assignments.
- Submit assignments by the given deadlines: typically **on the Saturday night following class.**
- **Back up and organize your work REGULARLY on *GitHub***. *Catastrophic loss of materials is no excuse for missed deadlines!*

VI. Part II. Special Note About Readings + Slides

- **Study the slides and tutorials ahead of class. Come prepared with questions if you don't understand them.** You will need to understand these materials and the examples given each week to be able to complete our weekly lab assignments.
- **We will likely be unable to present slides in class. You are therefore responsible for familiarizing yourself with this content even if we don't cover it in our session**. Our class is a "lab", meaning we will devote the majority of our time to rapid demonstrations and especially to completing the lab exercises themselves.

- Additionally, you are strongly encouraged to **consult the recommended documentation resources** found in our schedule. These provide context, will deepen your understanding, and will pay dividends in your coding this semester and far beyond...

VII. Communication

- Weekly course sessions will be held on Zoom. Use the recurring virtual Zoom classroom link emailed to you at the start of the semester.
- City Tech email accounts are our official means of communication, but we will also use Slack and OpenLab for additional discussion.
- **Requests to the instructor for assistance:** Send an email, or a message on Slack. I will respond during normal working hours; requests arriving "after hours" will be answered on subsequent weekdays.
- Slack should be used during regular hours. Please respond during the workday as promptly as you can to inquiries from the instructor (both for email and messages sent on Slack). *Multiple successive days without a response is unacceptable*.
- **Actively participate** in our online class discussions. **Thoughtfully contribute to a positive classroom environment**, while supporting and challenging your colleagues' ideas.
- **Check Slack regularly** for group and private messages.
- If you have a question that may be relevant to the group (about assignments, etc.), post in the #general channel on Slack.
- Use Slack for easy communications with your classmates as well — you can DM individuals or selected groups.

VIII. General Schedule of Topics

Please note: *Our schedule of topics and their precise order may change. See the SCHEDULE TAB on our Course Website for a precise breakdown of all tutorials, assignments, and other resources as the semester develops. For a detailed list of assignments, points, and deadlines, see the GRADING TAB.*

Week	Date	Topic(s)
1	8/31	File System: Introduction, Navigation, Paths, Output, Download, Uncompress
2	9/14	File System: Shell Scripting, Permissions, Date/Time, Editing Files
3	9/21	Version Control: Introduction to GIT, Concepts + Basic Commands
4	9/29	Version Control: Local/Remote Repositories + Collaboration Via GitHub
5	10/5	JavaScript + Python: Introduction, Variables, Types, Input/Output
6	10/14	Review: Version Control + Basic JavaScript/Python
7	10/19	Javascript + Python: Conditionals Javascript + Python: Debugging
8	10/26	Javascript + Python: For Loops
9	11/2	Javascript + Python: More Kinds of Loops
10	11/9	Javascript + Python: Functions Definitions + Function Calls

11	11/16	HTML/CSS: Introduction Review: Conditionals, Loops, Functions
12	11/23	HTML/CSS: Drawing on Web Pages (Using JavaScript + HTML Canvas)
13	11/30	Introduction to Python Data Visualization + Mapping
14	12/7	Introduction to GitHub Pages Review: HTML/CSS
15	12/14	Complete + Present Final Assignments

IX. Attendance + Participation Policy

IX. Part I. Virtual Participation on Zoom

- You will be required to **share your video connection for the duration of each class** unless the instructor changes video sharing permissions. **Occasionally you will also be called upon to share your audio and screen-sharing connections** (e.g. for asking or answering questions, demonstrating, and troubleshooting your code).
- You are welcome to send the instructor **an email describing any significant challenges to this weekly video conferencing requirement**. If necessary, we can work out an alternative.
- Find a quiet and presentable space that you don't mind sharing through your Zoom video connection. Alternatively, choose an appropriate virtual background within Zoom settings.
- **Do not use a photo.** Video of your face confirms (1) that you are present and participating in our class, and (2) whether you understand our discussion and materials. This simulates our normal physical classroom environment. Despite the challenges of distance learning, we must push ourselves to engage fully in lieu of in-person sessions.
- Therefore, *present yourself as you would in a physical classroom.*
- Utilize Zoom's **chat and hand-raising features for interacting with the instructor or the class**. Occasionally you will be prompted to answer questions, so these tools are essential.
- For questions about using Zoom and its features, consult the Zoom Help Center.
- **Test your internet connection on the day of class before it's too late**. If you are suddenly experiencing connection problems that prevent you from joining one of our sessions on time, send me a Slack message immediately, and an email later if necessary. Further information about our Attendance Policy appears below. Failure to proactively troubleshoot long-term connection problems (and/or to communicate with the instructor about them) will be problematic for your participation score.
- Avoid distractions from social media and unrelated gaming or web content. Strive to engage fully during our dedicated class time. We only meet on Mondays, so it will be difficult to recoup the losses of not paying attention later in the week, e.g. while finishing assignments.
- Typically we will take a 10-minute break in the middle of class. If you need additional time for restroom breaks or emergencies, quietly and occasionally excuse yourself by muting your video and audio on Zoom. However, **frequent and recurring self-excusals will reflect negatively with your engagement in our class and result in lowered participation marks**.
- Failure to comply with these policies **will result in a lowered participation score**. I grade holistically, but **will not be curving your scores** when long-term participation issues persist.
- **There is no extra credit in MTEC1003**. Therefore, plan accordingly.

- **Certain demonstrations in class may be recorded** for anyone in need of an asynchronous learning option. Any such videos will be made available temporarily through our Course Slack page, but will never be posted publicly.
- Bear in mind that you will be doing exercises on your computer at the same time we're discussing and presenting examples on Zoom. Locate an easy way to rapidly switch between the application windows open on your desktop, e.g. between Zoom and your Terminal, Text Editor, and/or Chrome. On macOS, for example, this is easily accomplished by holding down the Command key (⌘) and pressing TAB (tab) to switch between applications.

IX. Part II. Prompt Arrival and Absences

- Students are expected to arrive promptly to all virtual class sessions, stay online and involved through the duration of each session, participate and engage in our labs, discussions, and demonstrations.
- Follow this **Procedure for Absences:**
    - Contact a classmate for notes on what you missed (e.g. on Slack).
    - Check our Course Website for assignments, slides, tutorials, recommended documentation reading, etc.
    - After these first 2 steps, contact the instructor with any additional questions.
- **Excused absences/lateness must be accompanied by documentation** and/or include advance notice with the instructor where possible. Excused absences/lateness will not impact on your grade. Absences may be excused in cases of: documentation of illness provided by a doctor, religious observance with advance notice, official school-related activity (always with documentation and advanced notice), and on a case-by-case basis for other critical events, at the discretion of the instructor.
- *A lack of communication with the instructor about planned absences will therefore be treated as UNEXCUSED.* Be in touch early.
- **Unexcused absences and excessive lateness will result in lowered participation grades**. Prompt arrival online earns you an immediate 5 points (i.e. full participation). For arrivals after 2:30 PM, the following weighted score system applies:

Arrival ("Sign-on") Time	Participation Points
2:30 or earlier	5 points (full credit)
2:31—2:40	4 points
2:41—3:00	3 points
3:01—3:30	2 points
after 3:30	1 point
absent	0 points

- ***Additionally, three (3) unexcused absences will lower your final course grade by 10% (i.e. one letter grade).***
- ***Each additional unexcused absence will further lower your course grade in 5% increments.***

X. Academic Integrity Policy

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the university recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

Instructor Note: *Code borrowed from another source must be attributed as a comment within your own code. If you are unsure of whether or not your work may constitute plagiarism, please check with the instructor before submitting. Where applicable and where marked within our course materials, follow the provisions of the Creative Commons Attribution-ShareAlike 4.0 International License.*

XI. GENERAL GRADING RUBRIC for Project Work

Score	Grade	Description
93-100%	A	**Outstanding:** pushing the limits of both the student's creativity and the assignment.
90-92.9%	A-	**Impressive:** demonstrates maximum aptitude and/or organizational skills.
87-89.9%	B+	**High Achieving:** thoughtful and creative approach to the assignment.
83-86.9%	B	**Thorough:** clear articulation of skills, concepts, and preparation.
80-82.9%	B-	**Above Average:** quality work, but lacking in some problem-solving areas.
77-79.9%	C+	**Well Intentioned:** submitted on time, completed according to minimum requirements.
70-76.9%	C	**Average:** may need help with certain concepts and/or organization of ideas.
60-69.9%	D	**Poor:** does not meet the minimum requirements.
< 60%	F	**Fail:** not turned in, excessively late, or incomplete.

For a detailed list of assignments, points, and deadlines as they evolve and change throughout the semester, see the GRADING TAB on our Course Website.

XII. Course Accommodations for Students with Disabilities

In order to receive disability-related academic accommodations students must first be registered with the Student Support Services Program (SSSP). Students who have a documented disability or suspect they may have a disability are invited to set up an appointment with Ms. Linda Buist, the program manager of SSSP (Phone: 718–260–5143, e-mail: lbuist@citytech.cuny.edu). If you have already registered with SSSP, please provide your professor with the course accommodation form and discuss your specific accommodation with him/her/them.

XIII. Inclusivity

XIII. Part I. Name + Pronoun Usage

This course consists of individual work and group discussion. We must therefore strive to create an atmosphere of inclusion and mutual respect: all students will have their chosen gender pronoun(s) and chosen name recognized. If the class roster does not align with your name, gender, and/or pronouns, please inform the instructor.

XIII. Part II. Inclusivity Statement

It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as an asset, resource, strength, and benefit, rather than a checklist item or worse, a hindrance. It is my intent to present materials and activities that are respectful of diversity: gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups. Feel free to reach out to me via email at any time about any issues concerning you or with any such ideas.

—most recently revised on 8/14/20