



**New York City College of Technology**  
Entertainment Technology Department  
300 Jay Street, Room V-205 Brooklyn, NY 11201  
(718) 260-5588

**MTEC 1005, Tangible Media Lab, Section D274**

Lecture Hours, Lab Hours, Studio Hours, Credits and Total Hours

Prerequisites: MTEC 1001 OR MTEC 1002 OR IMT 1100

**FALL 2014**

Professor: Zevensuy Rodriguez

Office: Vorhees 411A

Office Hour(s): M/W 12-1pm

Email: [zrodriguez@citytech.cuny.edu](mailto:zrodriguez@citytech.cuny.edu)

Site: <https://openlab.citytech.cuny.edu/rodriguezmttech1005f2014/>

**Class Meeting Time:**

Monday/Wednesday, 10am-11:50, Vorhees 314

**Course Description:**

The goal of this course is to let students experiment and create electronic circuits and 3D prints. The class is divided into two main topics: Electronics and 3D Printing. Each topic while have several modules. After each module students will have created a circuit, model, or 3D print. Students will be introduced how to create physical interfaces by learning how to program the Arduino micro controller. They will learn how to use sensors to translate physical interaction to output a sensory experience. Finally, they will design and print 3D models. Students will learn basic fabrication, modeling techniques, and processes used in 3D printing. Then they will learn how to create models using Blender and learn how to print them.

**Grades:**

Your grade will be determined as follows:

Modules(7)	80%
Build Challenge (2)	10%
Attendance	10%

**Learning Outcomes**

After taking this class, the student will be able to...	This will be demonstrated by...
Able to create electronic circuits and identify components	Creation of circuits throughout the course and a Build Challenge
Understand the basics of programming Arduino micro-controller	Making an interactive circuits during the electronics modules
Understand 3D printing process and best practices	Creating a model and printing it

Able to design a basic physical human interface	How you integrate your electronic circuits and 3D printed objects
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### **Required Texts And Materials:**

There are no required texts. All students should download a version of Arduino from arduino.cc.

### **Recommended Texts And Materials:**

Arduino Cookbook, by Michael Margolis, O' Reilly, 2011

### **Attendance Policy:**

Attendance is required for all classes. If you have a legitimate reason for missing a class/assignment or if you will be late, you must contact me (see above) before class begins. It is City Tech policy that if you have three unexcused absences, you will fail the class. More than 3 absences will result in an "F" (Failure). TWO LATE ARRIVALS = ONE ABSENCE. If a student misses a class session, it is the student's responsibility to make up any work missed.

### **Make-ups**

If a student finds he or she will not be able to present or hand in a project on the scheduled day, it is the student's responsibility to notify the instructor PRIOR to that due date.

### **Event Attendance Policy (Departmental Policy)**

If you are going to work in our Industry, it is as important to be an educated and engaged audience member as it is to have a clear understanding of what happens behind the scenes. Also, when your peers and/or faculty are working hard on an event for the department, they should be rewarded with your strong support and encouragement, even though you may have had nothing to do with that project. There is nothing worse, after working a "zillion" hours, to have a small audience. Therefore, as part of completion of this course you will be REQUIRED to attend at least one of the department's and events. Please come and show your support as often as you can!

*This will be demonstrated by the writing of one 500-word report on any departmental event. The report should focus on one of the principles of interaction that we discussed in the first several weeks of class. You must clearly identify this principle, cite an example from the text, and organize your report around it.*

### **Academic Integrity Policy (College 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 College 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.

**\* Lesson Outline - Outline maybe adjusted as the semester progresses. Students will be notified.**