



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

## **MTEC 2250-D292 Tangible Media Skills**

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

**Prerequisites: MTEC 1005, PRE- OR CO-REQUISITE OF IMT 1102**

**Spring 2015**

**Professor: Zevensuy Rodriguez**

**Office: Vorhees v203**

**Email: zrodriguez@citytech.cuny.edu**

**Office Hour(s): M/W 1:30 – 2:00 P.M.**

### **Class Meeting Time:**

**Monday/Wednesday, 4-5:40 P.M., Vorhees 321**

### **Course Description:**

In this course students will spend the semester designing and building a prototype. We will explore the design process from the ideation phase to prototype and creation. The class is broken up to 3 sections: 3D Design and Production, Electronics, and PCB design. In the 3D Design section, students will be introduced to fabrication and modeling using SketchUp and Illustrator. They will fabricate their designs using laser cutters and 3D Printers. In the next section, we will be using Arduino microcontroller to add interaction to our prototypes. Finally, we will transfer our circuits from our breadboard to a PCB. We will use the EagleCAM software to design our board, which we will then get printed. At the end of the semester students will have produce a full working prototype with an enclosure, functioning electronics, and assembled PCB board.

### **Site:**

**<https://github.com/zevenwolf/mtec/wiki/mtec2250>**

### **Grades:**

**Your grade will be determined as follows:**

Modules(3)	<b>60%</b>
Final Project	<b>30%</b>
Attendance	<b>10%</b>

### **Learning Outcomes**

<b>After taking this class, the student will be able to...</b>	<b>This will be demonstrated by...</b>
Able to create fully functioning prototype	Completion of the 3 Modules

Learn the iterative design process	Presentations in class and peer review
Understand how different physical components fit together	Build an sealed enclosure
Understand the advanced programming of the Arduino micro-controller	Making an interactive circuit during the electronics modules
Able to design a PCB circuit board	Print and assemble your board

### **Required Texts And Materials:**

There are no required texts.

### **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.

### **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.