

## EMT 2461 Course Project -- Parts & Supplies

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This list is to help you get started with the preparation and ordering of some necessary parts, devices, supplies for the course project. It is extremely important to get the parts as EARLY as possible for a successful project! Otherwise you will find yourselves have no enough time to finish the project before the final demonstration date.

**Note:** The final complete parts you need for your project really depends on the nature of your project. Please feel free to consult with me anytime for any help you may need.

### Microcontroller Board (Micro-controller hardware and software)

- Arduino UNO board (~\$30)  
*Where to buy: iheartengineering.com, adafruit.com, pololu.com, amazon.com, sparkfun.com, dfrobot.com, ...*
- Arduino IDE software (free)  
*Download: www.arduino.cc*

### Electrical Componets (Motor controller and sensor circuit)

- Tamiya single or dual DC motor gear box set (~\$15)  
*Where to buy: ebay.com, pololu.com, jameco robot store, robotshop.com, roboticsmarketplace.com, amazon.com, sparkfun.com, ...*
- Integrated circuit H-Bridge (~\$3) or H-Bridge shield (~\$30)  
*Where to buy: dfrobot.com, pololu.com, sparkfun.com, mouser.com, digikey.com, jameco.com*
- Power supply (9V 1A adapter or 6V 2Ah battery pack) (~\$5)  
*Where to buy: amazon.com, sparkfun.com, ...*
- Breadboard (half size) (~\$5)  
*Where to buy: amazon.com, sparkfun.com, elexp.com, pololu.com, jameco.com, ...*
- Jumper wires (20), 1k and 10k resistors, 100nF and 100uF capacitors, push buttons, LEDs (6 each) (~\$5)  
*Where to buy: amazon.com, sparkfun.com, jameco.com, digikey.com, ...*

### Mechanical Components (for Robotics or elevator projects)

- Masonite clipboard (standard size 9 x 12 inch) (~\$2)  
*Where to buy: Staples, OfficeMax, WalMart, school supplies section of a store*
- Glue stick (small) (~\$1)  
*Where to buy: Staples, OfficeMax, WalMart, school supplies section of a store, ...*
- Zip tie, Velco, duct tape, packing tape (~\$3)  
*Where to buy: local hardware store, Staples, school / packaging supplies store, or even 99C store*

**Note:**

1. You can ALWAYS try ebay.com!
2. If it is possible, ALWAYS use in-town vendors for fast shipping.
3. Additional parts and supplies may be needed depending upon the nature and complexity of your project. If you have any question, just feel free to let me know.