



# UMPQUA COMMUNITY COLLEGE

## Integrating Advanced Technologies into Education and the Workplace





# Advanced Technologies in Workplace

## Construction

Buildings, Sitework, Utilities

Computer Aided Design

GPS



## Manufacturing

Automated Manufacturing

Computer Aided Design

CNC Machinery

Robotics





# UCC - Advanced Technologies in Education

## Computer Aided Design (CAD)

AutoCAD, Civil3D, Solidworks, ArcGIS, TraversePC, Inventor, Revit

## 3D Printers



## GPS

Survey Accuracy – 1 cm





# UCC - Advanced Technologies in Education

## CNC (Computer Numeric Control) Machinery

CNC Plasma Cutter

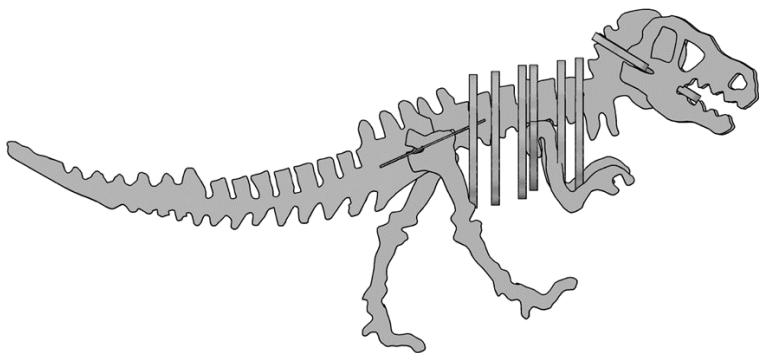






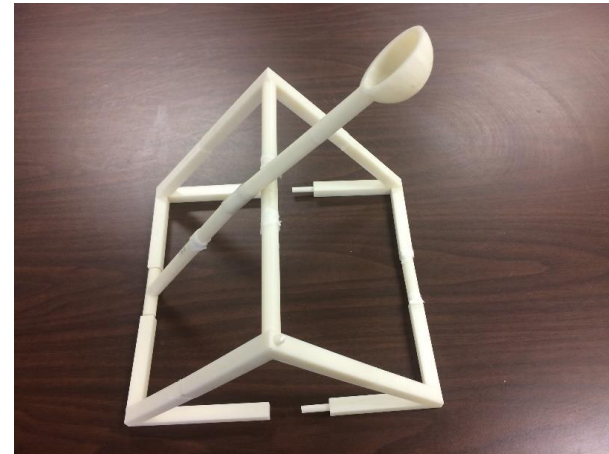
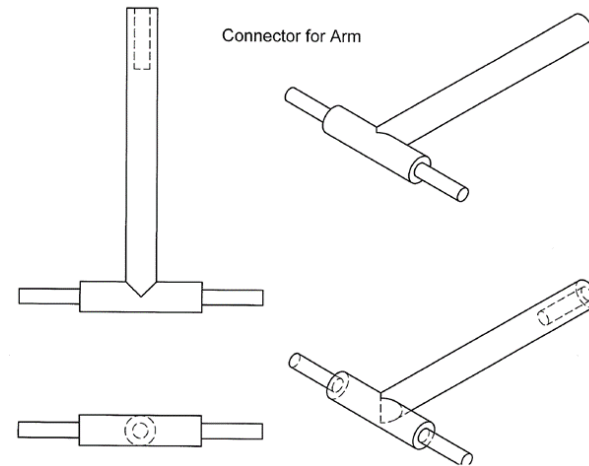
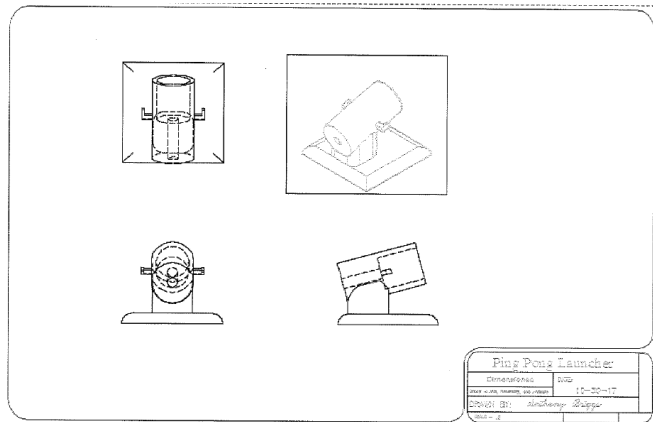
# Examples: UCC Advanced Technologies in Education & Workplace

- 1) **3D Printing in a First Year Engineering Project**  
UCC Engineering Students
- 2) **Cross Discipline – CAD, 3D Printing, Welding**  
UCC Welding Students
- 3) **Training for Local Businesses/Industry**  
FCC Commercial Furniture



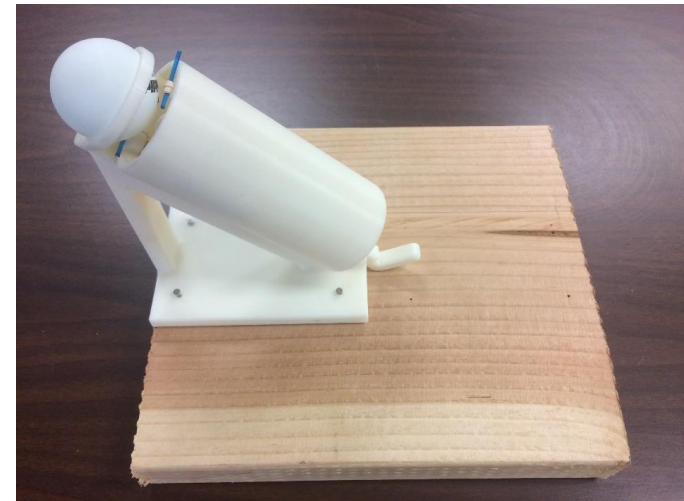
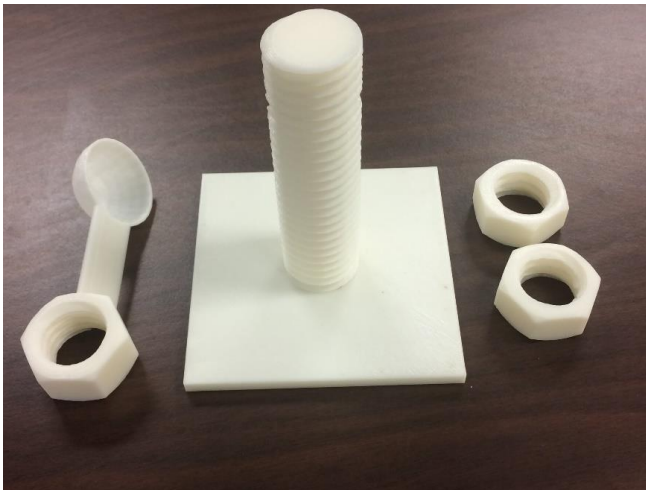
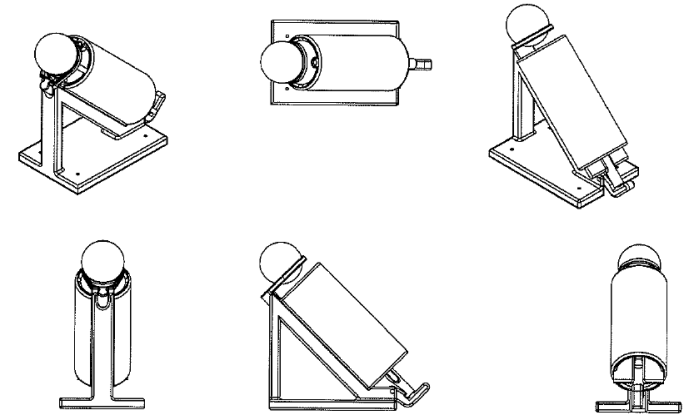
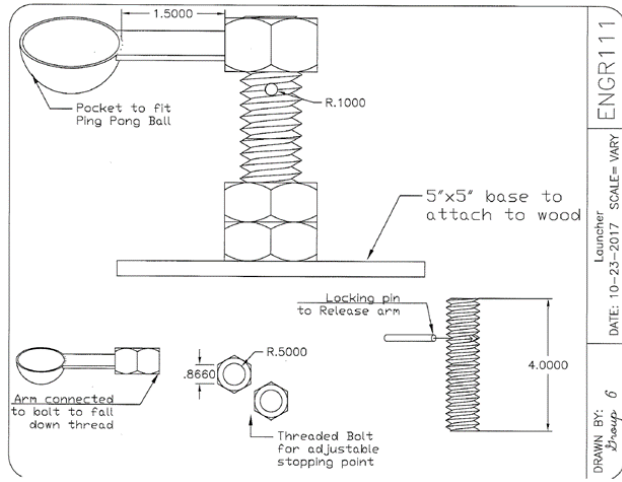


# 3D Printing in a First Year Engineering Project





# 3D Printing in a First Year Engineering Project

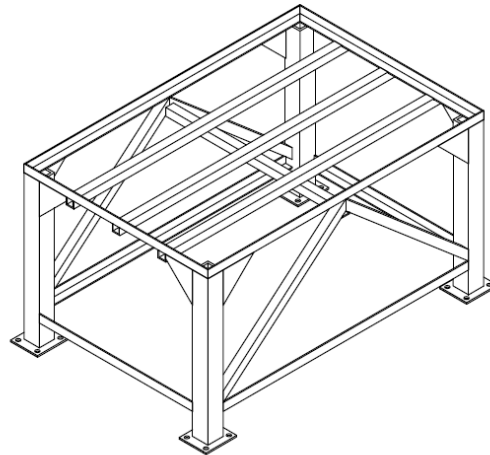




# Cross Discipline – CAD, 3D Printing, Welding

## BILL OF MATERIAL

QTY	TYPE	LENGTH	SIZE	COST
4	SQ. TUBING	18 13/16"	2X2X1/4	\$60.34
2	ANGLE IRON	36"	1X1X1/8	\$15.40
2	ANGLE IRON	24"		
2	ANGLE IRON	32"		
2	ANGLE IRON	20"		
1	SQ. TUBING	24"	1X1X.120	\$20.14
3	SQ. TUBING	36"		
4	SQ. TUBING	22"		
8	STEEL PLATE	4'X4'	3/16	\$40.80
4	STEEL PLATE			
TOTAL COST				\$136.68
COST +25%				\$170.85



### NOTE

- ALL PARTS MUST BE TACK WELDED TOGETHER PRIOR TO WELDING
- 3/16" WELDS ON ALL JOINTS

APPROVALS	DATE	CHRIS BROADSWORD
DRAWN CB	11/29/17	
CHECKED		TITLE
APPROVED		
		WORK TABLE
TOLERANCE: ±1/16		SCALE 1:10
		SHEET 1 OF 3







# Cross Discipline – CAD, 3D Printing, Welding

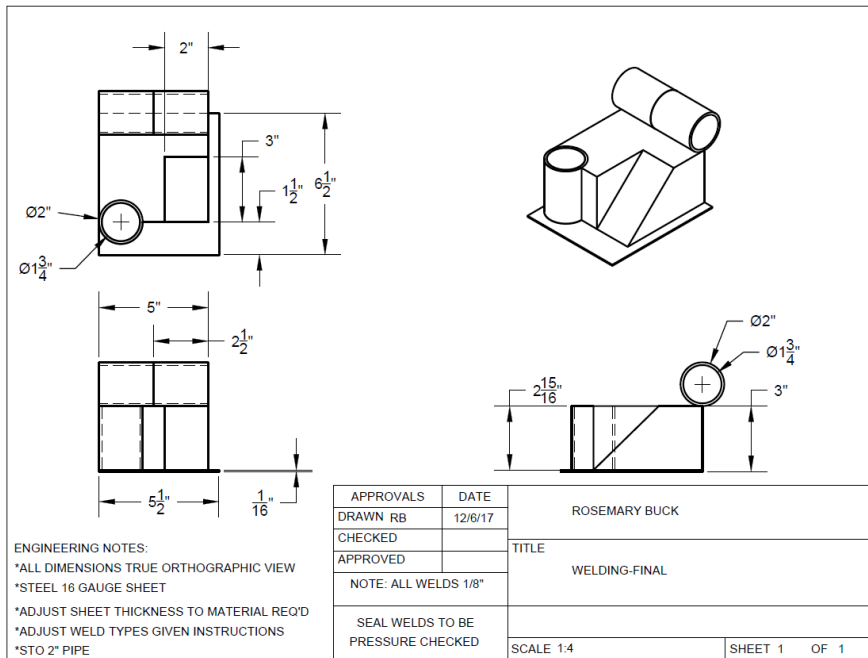
NOTE: SEE PAGE 2 FOR DETAIL A AND B

APPROVALS	DATE	CHRIS BROADSWORD
DRAWN CB	2/24/18	
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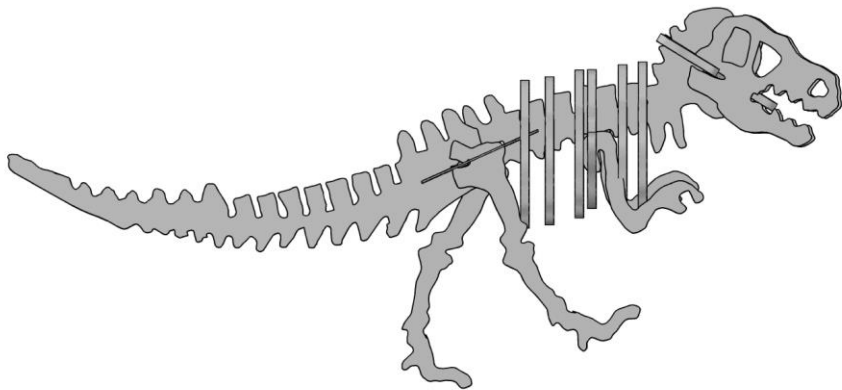
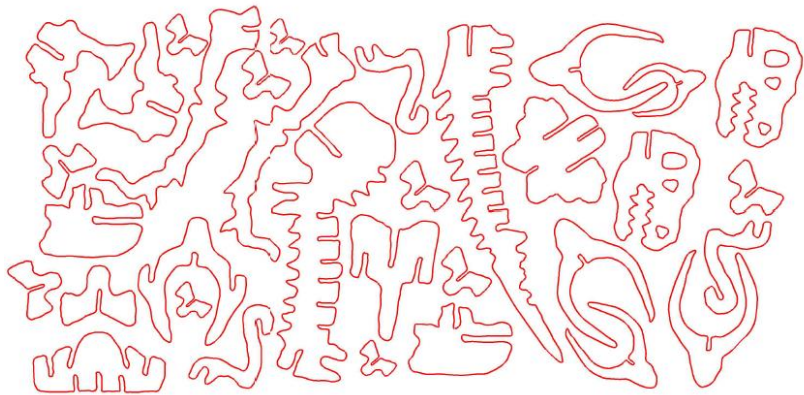


# Cross Discipline – CAD, 3D Printing, Welding





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# Training for Local Businesses/Industry

