

Luthier with a New perspective  
(Design and Construction of an Acoustic  
Instrument)

Entertainment Technology

Culmination Proposal

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## Luthier with a New perspective

### SCOPE

For my culmination Project, I will design and engineer a new musical instrument. It will be a stringed instrument of West African influence. The invention of Midi controllers and vst plugins offer musicians an endless possibility of musical sounds. However, a computer cannot replicate the actual physical instrument. The art of instrument making will carry on for years to come. With the aid of electronics, acoustic sounds can be further modified taking instrument sound and designs into the next generation. I will be utilizing knowledge obtained from classes such as Musical concepts, Physics, Music Synthesis, and even Scenic construction. My job title for this project will be Chief Designer and Engineer. This project will test my ability to construct an instrument that has different timbre characteristics than other string instruments known today.

### Deliverables

The final and complete project will:

- Be a 12 stringed musical instrument made with wood / metal.
- Have a completely original design.
- Be fitted with pickups, pans, and tone knobs for electrical amplification.
- Be made with a budget of no more than \$300.

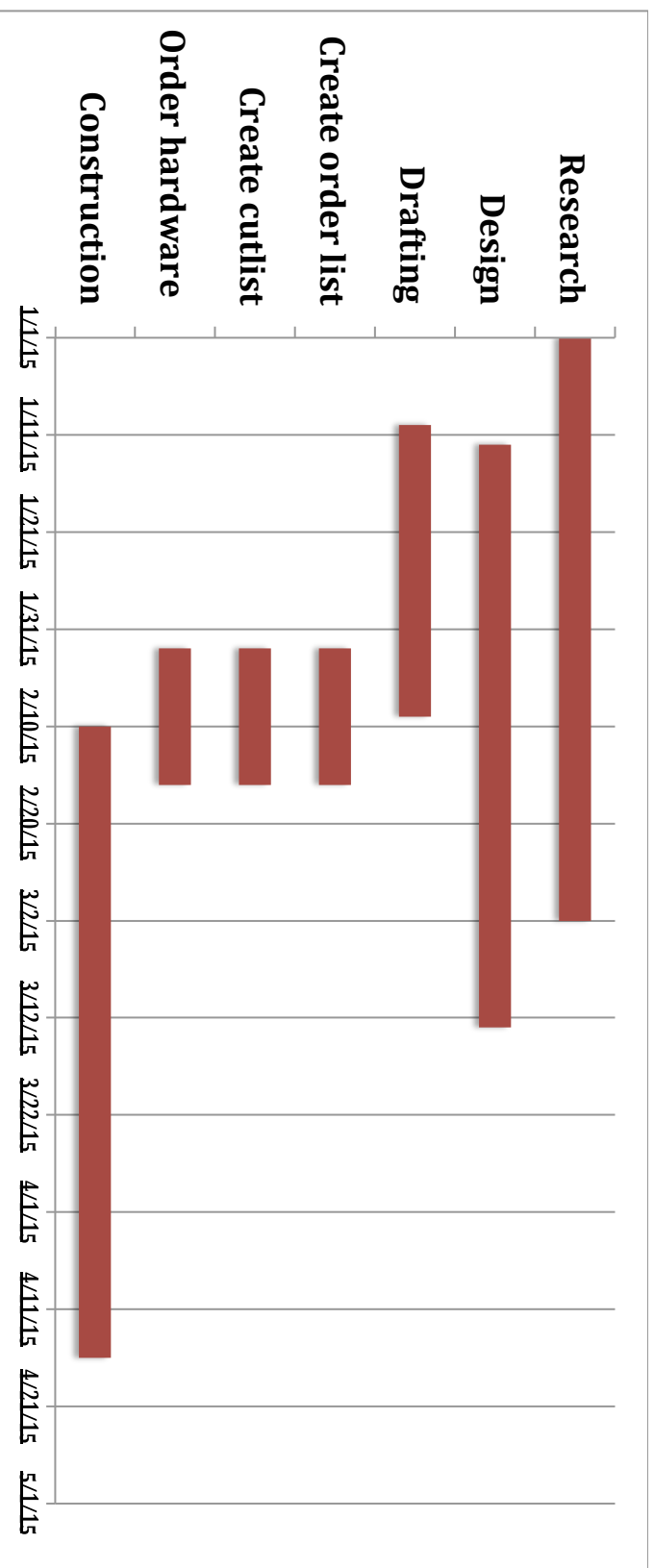
## BUDGET

This budget is an approximate estimate for the cost of materials used for this project. 10 percent contingency is added for shipping and possible error cost. Money obtained to fund this project will be out of my own pocket.

Item	Amount	Price	10% contingency	Cost
Elixir Strings	2 bags	\$20ea	\$2	\$22
Lumber		\$150	\$15	\$165
Pickups	2	\$16	\$1.60	\$17.60
Tuning pegs	6	\$10	\$1	\$11
Bridge	2	\$10ea	\$1	\$21
Hardware		\$40	\$4	\$44
<b>Estimated Grand total</b>				\$280.60



## CALANDAR



## MILESTONES

1. January 1<sup>st</sup> –February 20<sup>th</sup> is the design and research phase.
2. February 10<sup>th</sup> hardware such as pickups, tuning knobs, screws, use to construct project will be ordered.
3. February 17<sup>th</sup> Construction begins
4. April 17<sup>th</sup> project is complete, prepare for presentation

## SUMMARY

This project will use knowledge learned from my favorite classes including scenic construction. At the end of this project I expect to have engineered a fully functional acoustic/ electric stringed instrument. Possibly 2 if there is enough time. By the end of this project, I hope to have learned how to change the timbre of an instrument by using different materials and though the aid of electronics. I also expect to learn how to budget my time and resources to execute and deliver this project on time.