

## Team Meeting Minutes

Marching Band Triangles

Date: 6/12/2019

Time: 1:30 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Come up with a team name
- Generate ideas for handle and bag

### New Business:

- Generate ideas for handle and bag
- Complete Team contract

### Summary of Conclusions:

- Came up with 3 ideas for the handle. A three finger hold, a reversed three finger hold, or a fist hold
- Faris and Bryce started working on the team contract

## Team Meeting Minutes

Marching Band Triangles

Date: 6/13/2019

Time: 11:30 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Generate ideas for handle and bag
- Complete Team contract

### New Business:

- Complete the Budget Estimate
- Design a sketch of product
- Generate questions to ask Dr. Rinker

### Summary of Conclusions:

- Richard worked on SolidWorks to design a sketch of the handle
- Abdullah worked on the budget estimate while Bryce and Faris finishing up the team contract

## Team Meeting Minutes

Marching Band Triangles

Date: 6/18/2019

Time: 1:30 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Complete the Budget Estimate
- Design a sketch of product
- Generate questions to ask Dr. Rinker

### New Business:

- Get a quote for the rebar
- Build a prototype of handle
- Discuss pros and cons of handle with Dr. Rinker

### Summary of Conclusions:

- Went to the laser cut and built our first prototype handle that is made of wood
- We met with Dr. Rinker and showed him the prototype as well as asking him for funds status

## Team Meeting Minutes

Marching Band Triangles

Date: 6/21/2019

Time: 11:30 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Get a quote for the rebar
- Build a prototype of handle
- Discuss pros and cons of handle with Dr. Rinker

### New Business:

- Complete Project Requirements
- Make adjustments on design after meeting with Dr. Rinker

### Summary of Conclusions:

- We met to make some changes on handle design after meeting with Dr. Rinker
- We divided the work for the Project Requirements assignment

## Team Meeting Minutes

Marching Band Triangles

Date: 6/21/2019

Time: 11:30 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Get a quote for the rebar
- Build a prototype of handle
- Discuss pros and cons of handle with Dr. Rinker

### New Business:

- Complete Project Requirements
- Make adjustments on design after meeting with Dr. Rinker

### Summary of Conclusions:

- We met to make some changes on handle design after meeting with Dr. Rinker.
- We divided the work for the Project Requirements assignment

## Team Meeting Minutes

Marching Band Triangles

Date: 6/24/2019

Time: 12:30 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Complete Project Requirements
- Make adjustments on design after meeting with Dr. Rinker

### New Business:

- Assign a Wiki Master
- Assign a team member that is responsible for purchasing

### Summary of Conclusions:

- Met to assign the Wiki Master, Faris
- Met to assign Purchasing Leader, Richard
- Decided on meeting the next day at 8:00 am to explain what happened at meeting with Mr. Martin to other team member who weren't able to attend meeting

## Team Meeting Minutes

Marching Band Triangles

Date: 6/25/2019

Time: 8:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Bryce, Faris

### Old Business:

- Assign a Wiki Master
- Assign a team member that is responsible for purchasing

### New Business:

- Explain what happened at meeting with Mr. Martin
- Make some changes on design before meeting Dr. Swanson

### Summary of Conclusions:

- Mr. Martin asked for some changes on design of handle to meet their requirements
- He liked the size of the triangle that were borrowed from Dr. Odom and didn't want to change it

## Team Meeting Minutes

Marching Band Triangles

Date: 6/25/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Explain what happened at meeting with Mr. Martin
- Make some changes on design before meeting Dr. Swanson

### New Business:

- Pitch to Dr. Swanson
- Two teams of two to speed up process and get more information on rebar and on handle

### Summary of Conclusions:

- Decided make two teams. One team of two members will dedicate their time to come up with three more design options and show it to Dr. Rinker. The other team work on how and where to bend the rebar



## Team Meeting Minutes

Marching Band Triangles

Date: 6/25/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Pitch to Dr. Swanson
- Two teams of two to speed up process and get more information on rebar and on handle

### New Business:

- Meeting with Dr. Rinker and Nancy
- Make our first triangle prototype
- Purchase materials

### Summary of Conclusions:

- Discuss with Dr. Rinker what Mr. Martin said about the design
- Change design by adding space on the middle part so it can fit the lights
- Change the handle size to be a little bit bigger
- Get the right dimensions to cut the rebar

## Team Meeting Minutes

Marching Band Triangles

Date: 6/27/2019

Time: 1:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meeting with Dr. Rinker and Nancy
- Make our first triangle prototype
- Purchase materials

### New Business:

- Design a new jig
- Make adjustments on handle design

### Summary of Conclusions:

- Come up with ideas to prevent rebar from moving in the z and x direction
- Make some modifications to the handle

## Team Meeting Minutes

Marching Band Triangles

Date: 6/28/2019

Time: 12:30 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Design a new jig
- Make adjustments on handle design

### New Business:

- Meet with Selso to discuss the new jig design
- Start on the portfolio

### Summary of Conclusions:

- Talk to Selso about a design for the jig
- Draw a sketch for the new design of the jig
- Split the sections on the portfolio

## Team Meeting Minutes

Marching Band Triangles

Date: 7/1/2019

Time: 2:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meet with Selso to discuss the new jig design
- Start on the portfolio

### New Business:

- Make another jig design
- Modified the handle design

### Summary of Conclusions:

- Talked to Selso and he gave us some feedback
- Make the new design after Selso's suggestion

## Team Meeting Minutes

Marching Band Triangles

Date: 7/2/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Make another jig design
- Modified the handle design

### New Business:

- Meet with Dr. Swanson and Dr. Rinker
- Confirm the new jig
- Try a new triangle

### Summary of Conclusions:

- Discuss progress with Dr. Swanson
- Meet Dr. Rinker and try the LED's at the Kebbie Dome
- Build a new triangle

## Team Meeting Minutes

Marching Band Triangles

Date: 7/3/2019

Time: 1:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meet with Dr. Swanson and Dr. Rinker
- Confirm the new jig
- Try a new triangle

### New Business:

- Weld the new design to of the jig to the old jig
- Make adjustments on handle design after meeting Dr. Rinker and Swanson
- Make our final trial for a triangle

### Summary of Conclusions:

- Build a new jig with a stopper
- Choose a dimension for the triangle
- Make couple of triangles to test the new jig

## Team Meeting Minutes

Marching Band Triangles

Date: 7/8/2019

Time: 1:30 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Weld the new design to of the jig to the old jig
- Make adjustments on handle design after meeting Dr. Rinker and Swanson
- Make our final trial for a triangle

### New Business:

- Test the modified jig
- Laser cut the modified design for the handle
- Meet with Chelsey to talk about pouches

### Summary of Conclusions:

- We added an angle indicator from each side that would let us know when should we stop bending
- Laser cut the new modified handle

## Team Meeting Minutes

Marching Band Triangles

Date: 7/9/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Test the modified jig
- Laser cut the modified design for the handle
- Meet with Chelsey to talk about pouches

### New Business:

- Propose the modified design of the handle and the jig to Dr. Swanson
- Get feedback on modified handle design
- Work on Portfolio after Dr. Swanson feedback

### Summary of Conclusions:

- Meeting with Dr. Rinker and Swanson to discuss handle design and progress of project
- Got our portfolio back and we worked on it for some modifications



## Team Meeting Minutes

Marching Band Triangles

Date: 7/10/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Propose the modified design of the handle and the jig to Dr. Swanson
- Get feedback on modified handle design
- Work on Portfolio after Dr. Swanson feedback

### New Business:

- Come up with a new jig design
- Laser cut a modified handle and bring it to the Design Review
- Prepare for Design Review

### Summary of Conclusions:

- Old design worked fine but there was not consistency, so we came with a new jig design
- New jig design should solve the problem of instability of the rebar

## Team Meeting Minutes

Marching Band Triangles

Date: 7/11/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Come up with a new jig design
- Laser cut a modified handle and bring it to the Design Review
- Prepare for Design Review

### New Business:

- Final touches on Design Review PowerPoint
- Meet Tadd for CNC plasma cut, cut metal for the new jig design
- Assemble new jig
- Test the new jig

### Summary of Conclusions:

- Met to create a PowerPoint and practice for the Design Review
- Went to JLM for the plasma cut for the new design jig

## Team Meeting Minutes

Marching Band Triangles

Date: 7/12/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Final touches on Design Review PowerPoint
- Meet Tadd for CNC plasma cut, cut metal for the new jig design
- Assemble new jig
- Test the new jig

### New Business:

- Meet Chelsey for the prototype pouch

### Summary of Conclusions:

- Go to Chelsey and see the prototype she made for the pouch

## Team Meeting Minutes

Marching Band Triangles

Date: 7/15/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meet Chelsey for the prototype pouch

### New Business:

- Prepare for meeting with Dr. Swanson tomorrow
- Come up with ideas to validate the new jig design
- Meet with a marching band member

### Summary of Conclusions:

- Create a modified handle for the meeting with Dr. Swanson
- Create 3 triangles with the old jig and make sure they are all identical
- Meet a member from the marching band to ask about how the handle design feel and to show us their uniform

## Team Meeting Minutes

### Marching Band Triangles

Date: 7/16/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meet to prepare for meeting with Dr. Swanson tomorrow
- Come up with ideas to validate the new jig design
- Meeting with a marching band member

### New Business:

- Discuss progress with Dr. Swanson
- Pick a length for the triangle
- Update drawings

### Summary of Conclusions:

- Meeting with Dr. Swanson. He asked us a lot of questions that we didn't have answers for which we will work on solving and having the answers by next meeting on Thursday
- Most of our drawings didn't have BoM, so we have to update them

## Team Meeting Minutes

### Marching Band Triangles

Date: 7/17/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Discuss progress with Dr. Swanson
- Pick a length for the triangle
- Update drawings

### New Business:

- Work on fixing the jig
- Make triangles to test the jig
- Get into 2 teams of 2 to speed up the triangle production

### Summary of Conclusions:

- The jig wasn't accurate with angle which would lead us to inconsistent triangles. So we had to change the fins from  $57^\circ$  to a  $60^\circ$  angle
- Since producing the handles isn't an issue and wouldn't take a lot of time, we thought about dividing into a morning and an afternoon teams.

## Team Meeting Minutes

### Marching Band Triangles

Date: 7/18/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

## Old Business:

- Work on fixing the jig
- Make triangles to test the jig
- Get into 2 teams of 2 to speed up the triangle production

## New Business:

- Meeting with Dr. Swanson to discuss the progress of the project
- The new jig consist of a fins at 60 degrees angle
- Work on Design Value Proposition

## Summary of Conclusions:

- Dr. Swanson was not happy with our result in the weekly meeting on Tuesday so we meet him today to show him our new result about the jig and the triangles
- The new jig with a 60° angel worked and we are able to make more than 5 consist triangles

## Team Meeting Minutes

Marching Band Triangles

Date: 7/22/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meeting with Dr. Swanson to discuss the progress of the project
- The new jig consist of a fins at 60 degrees angle

### New Business:

- Bryce and Brock Bend triangles in the morning until 11:30 am
- Abdullah and Faris take over at 12:30 p.m.
- We fixed the threads because they were worn out

### Summary of Conclusions:

- The threads of the jig couldn't stay longer. We couldn't tight the screw in so we had to fix by making the threads bigger



## Team Meeting Minutes

Marching Band Triangles

Date: 7/23/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Bryce and Brock Bend triangles in the morning until 11:30 am
- Abdullah and Faris take over at 12:30 p.m.
- We fixed the threads because they were worn out

### New Business:

- Meeting with Dr. Swanson to discuss the progress of the project
- Ask to meet Chelsey for the pouches
- Update drawings
- The jig was fractured so we asked Bill to fix it

### Summary of Conclusions:

- The meeting with Dr. Swanson was brief and he liked the outcome
- We met with Spenser to show him a new pouch design which he liked and had some feedback about the size
- Morning shift was working on making triangles and the back of the jig fractured so we broke it and asked Bill to re-weld it again

## Team Meeting Minutes

### Marching Band Triangles

Date: 7/24/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Meeting with Dr. Swanson to discuss the progress of the project
- Ask to meet Chelsey for the pouches
- Update drawings

### New Business:

- Bryce and Brock worked on bending more triangles
- Faris and Abdullah worked on bending more triangles
- Our goal is to reach 85 triangles by the end of the day

### Summary of Conclusions:

- Brock and Bryce worked from 9:30 - 10:45 a.m. on bending triangles
- Abdullah and Faris worked from 2:00 – 4:20 p.m.
- Our goal is to bend 85 triangles but we ran out of time and now we have 80 triangles

## Team Meeting Minutes

### Marching Band Triangles

Date: 7/25/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Bryce and Brock worked on bending more triangles
- Faris and Abdullah worked on bending more triangles
- Our goal is to reach 85 triangles by the end of the day

### New Business:

- Work on portfolio
- Work on the Snapshot requirements
- Bend triangles

### Summary of Conclusions:

- Update Project Management and drawings for the handle and jig
- Brock and Bryce bent 8 triangles before they ran out of gas
- Bill said the new tank will arrive either on Monday or Tuesday of next week which is a little step back because the plan was to finish 150 triangles by Friday

## Team Meeting Minutes

Marching Band Triangles

Date: 7/29/2019

Time: 1:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Work on portfolio
- Work on the Snapshot requirements
- Bend triangles

### New Business:

- Worked on the portfolio

### Summary of Conclusions:

- Since the gas tank hasn't arrived yet, we still can't bend more triangles. Currently we have 90 triangles.
- Brock worked on the project learning of the handle
- Abdullah worked on the project learning of the jig
- Bryce worked on the project learning of the pouch
- Faris worked on the jig drawings

## Team Meeting Minutes

Marching Band Triangles

Date: 7/30/2019

Time: 12:00 p.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

- Worked on the portfolio

### New Business:

- Meeting with Spenser
- Meeting with Dr. Swanson
- Meeting with Chelsey for the pouches
- Cut the metal dowel rod
- Update portfolio and drawings

### Summary of Conclusions:

- Brock and Bryce met with Spencer to show him the final design. He commented on the sensor's wire that is short and needs to be 12in
- The sensor is too high and need to be set down
- Talked with Dr. Swanson about the progress of our project and the deliverables
- Brock and Bryce met with Chelsey to talk about the final design of the pouches
- Abdullah worked on updating the project management since the gas tank hasn't arrived yet

## Team Meeting Minutes

Marching Band Triangles

Date: 7/31/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

### New Business:

### Summary of Conclusions:

## Team Meeting Minutes

Marching Band Triangles

Date: 8/1/2019

Time: 11:00 a.m.

LOCATION: Gauss- Johnson Engineering Building

In attendance: Richard, Abdullah, Bryce, Faris

### Old Business:

### New Business:

### Summary of Conclusions: