

Modified Bicycle Motion Capstone

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Team 19

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- Client Contact

- Web Developer

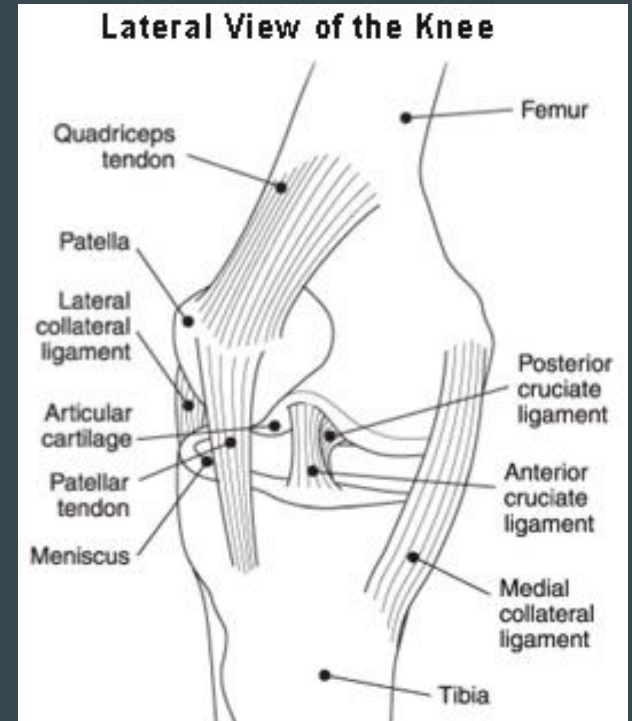
- Project Manager

- Secretary

- Budget Liaison

Project Introduction

- Dr. Scot Raab
 - Assistant Professor in Athletic Training
 - Long-time cyclist
- Modified Bicycle Motion
 - Limit Range of Motion (ROM) experienced by the knee
 - Knee Joint pain
 - Create maximal torque
 - Limit the modifications to existing bicycles

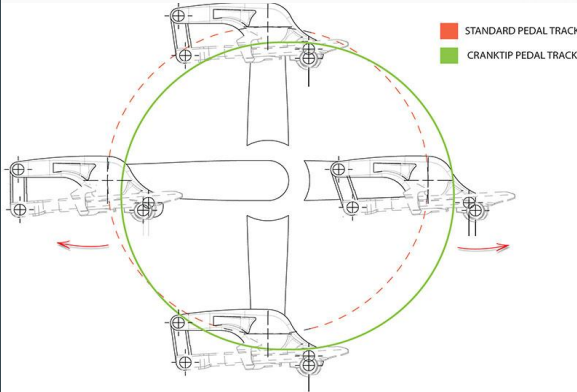


Project Background



- Current solutions
 - Reducing pedal crankarm length
 - Reduces torque output
 - Raising saddle height
 - Impairs pedalling efficiency
 - Creates lower back pain

Benchmarking



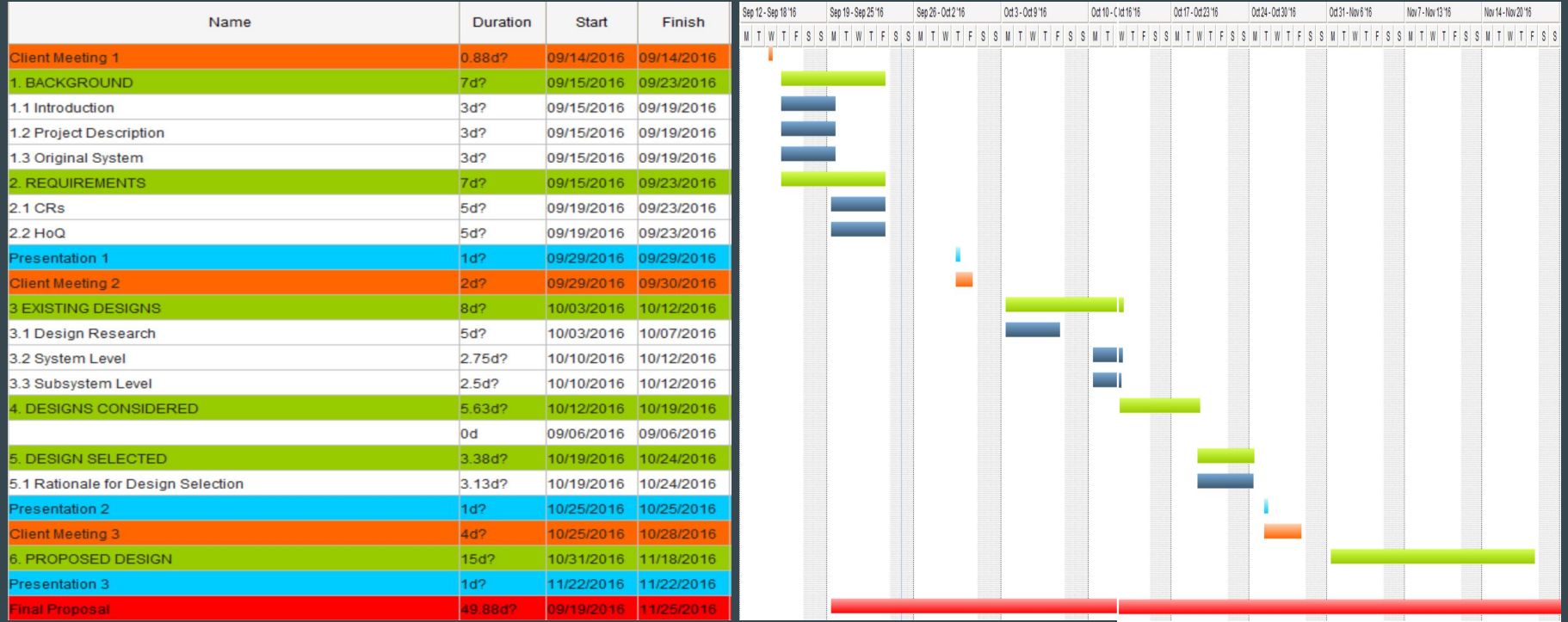
Customer Requirements / House of Quality

Key Customer Requirements

- Retrofittable
 - Ability to apply design to nearly any bike
- Maximum Torque
 - Create the maximum amount of torque through the crankset

Customer Requirements	Weight Factor
Durable	4
Retrofittable	5
Low weight	3
Max. Torque	5
Low cost	2
Safe	4
Aesthetics	2

Gantt Chart



Budget

Designated Budget: \$1500

Expenditures: To Be Determined

Questions?

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