Subteam	Material	Price	Quantity	Total	Reasoning
Manufacturing	50 yrds Carbon Fiber Roll	$1,424.19	1	$1,424.19	Carbon fiber is our main material used in the construction of the Iron Bird. We are currently out of it, causing manufacturing to come to a screeching halt.
Manufacturing	Shop Vac	$48.97	1	$48.97	With our work with composite materials as well as the other manufacturing done in the lab, we need a reliable way to clean up after ourselves. We dont currently have a god way to do this and a shop vac will fix this
Manufacturing	Randomly Orbiting palm sander	$59.00	1	$59.00	To effectively shape our designs and get them to the correct tolerances, we will need a randomly orbiting palm sander
Manufacturing	JigSaw	$99.00	1	$99.00	OUr designs require a lot of large cuts and cuts that require a very specific geometry, something a jigsaw will allow us to do. Without it, we cannot get the right geometry and tolerances through the basic handtools currently in use
Manufacturing	24 oz parting wax	$12.25	1	$12.25	Used in our carbon fiber layups
Manufacturing	Body Foam	$40.04	3	$120.12	Foam molds used to create the structure and the molds for the carbon fiber layup
Manufacturing	Flite Test Maker Foam White 30x40 BiFold (25 Pack) Water resistant	$99.00	1	$99.00	This foam board can be used for various parts of the UAS, including tail surfaces, electronics bay, and posibly the wing
Manufacturing	Midwest Carbon Fiber Tube . 210 OD x .132 ID x 40"	$8.59	4	$34.36	Carbon fiber tube for interior wing and tail supports
Manufacturing	Midwest Carbon Fiber Tube . 125 OD x .060 ID x 40"	$6.39	4	$25.56	Carbon fiber tube for interior wing and tail supports
Manufacturing	Carbon Fiber Roll Wrapped Twill Square Tube	$49.75	1	$49.75	Tail boom, connecting fuaelage to tail surfaces on UAS
Manufacturing	N95 Masks	$24.97	2	$49.94	N95 masks used for when cutting into noxious materials like fiber glass for safety
Flight Test	Student Membership to the Central Iowa Aeromodelers radio-controlled aircraft flying field - 1 year	$35.00	1	$35.00	The Central Iowa Aeromodelers flying field is located about 7 miles South-South East of Ames. It has a 350ft long petromat runway and grass suitable for taking off and landing our UAS. This field is the best location locally, where the team can fly our UAS with little to no risk of damage to the aircraft due to the takeoff/landing location. To gain use of this field, our team pilot must be a member of the Central Iowa Aeromodlers Flying club.
Flight Test	Academy of Model Aeronautics (AMA) membership - 1 year	$75.00	1	$75.00	The AMA is a “governing body” for radio-controlled aircraft and includes limited liability insurance with its membership. AMA membership is mandatory for membership in the Central Iowa Aeromodlers club, including the use of their flying field.
Flight Test	Folding Aircraft Propeller - 12x10	$13.00	2	$26.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	Folding Aircraft Propeller - 13x10	$14.00	2	$28.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	Folding Aircraft Propeller - 14x10	$15.00	2	$30.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	Folding Aircraft Propeller - 14x12	$15.00	2	$30.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	36/5 Spinner for folding propeller	$18.00	2	$36.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	45/5 Spinner for folding propeller	$25.00	2	$50.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	38/08 Yoke for folding propeller	$9.00	2	$18.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	47/8 Yoke for folding propeller	$10.00	2	$20.00	A folding aircraft propeller will allow our UAS to land on its belly without damaging its propeller, motor, or motor mount.
Flight Test	Audio cable (2 pack)	$8.07	1	$8.07	Standard 3.5mm audio cable will enable us to connect two aircraft transmitters together for the purpose of training new UAS pilots.
Structures	Tail Wheel Bracket	$3.39	1	$3.39	Bracket for connecting tail wheel to UAS.
Structures	Tail Wheel	$3.09	1	$3.09	Tail wheel for UAS.
Structures	Landing Gear Tires	$9.49	2	$18.98	Main Landing gear tires for the UAS.
Structures	Axle Shaft	$7.49	1	$7.49	Axle shafts for landing gear wheels of the UAS.
Structures	Landing Gear Bracket	$19.75	1	$19.75	Main landing gear bracket for UAS.
Structures	Nose gear bracket	$6.99	2	$13.98	Nose landing gear bracket for UAS.
Lab Supplies	Adhesive Aluminium Ducting Tape	$8.99	1	$8.99	Aluminum tape is ideal for reinforcing control surface hinges and making patches.
Lab Supplies	Gorilla Clear packing tape	$6.77	2	$13.54	Clear packing tape for patching foam surfaces, reinforcing control surface hinges, and general use
Electronics	Benewake TFMINI-S Micro LIDAR Module (UART / I2C)	$39.90	1	$39.90	A lidar sensor is needed to detect the vertical distance of the UAS for the pixhawk to use the autoland feature
Electronics	LeddarTech LeddarOne Optical Rangefinder (3.3V UART)	$125.00	1	$125.00	A lidar sensor is needed to detect the vertical distance of the UAS for the pixhawk to use the autoland feature. This one is not as important to have if we have the benewake TFmini, but it would be useful to test the effectivness of different lidar sensors
Electronics	PRT-10376 (LeddarOne connector)	$1.95	2	$3.90	Standard 6 pin female connector to interface with the pin header on the LeddarOne optical rangefinder. Quantity 2 for redundancy
Electronics	PX4FLOW smart camera	$105.00	1	$105.00	When used in tandem with a distance sensor, the PX4flow can detect velocity, which is nessesary for the implementing optical flow feature
Electronics	Lidar Cable	$5.50	1	$5.50	Used to interface our lidar sensor with flight computer
				$2,746.72	