MMAE-416 Aircraft Design II
Safety Manual
18 February, 2015

Introduction
MMAE-416 Aircraft Design II course requires groups of students to build model airplanes from balsa wood, plywood and from other common materials. Required hand tools and power tools are made available to students in room E1-141 during lab hours. Some construction may take place outside of class.

General Safety Requirements
1. At no time may sandals or other open-toed shoes be worn in any laboratory.
2. At no time may food be consumed in any laboratory.
3. Care should be exercised when using hand tools, power tools, and various glues during construction.
4. Wear safety glasses/goggles at all times when working in lab.
5. Students should note the location of the first aid kit.
6. In the event of an emergency, students should immediately evacuate the room and call IIT Department of Public Safety at (Emergency: 312-808-6363, Non-Emergency: 312-808-6300).

Specific Safety Requirements for E1-141 Lab for Construction Activities
1. Care should be exercised when using cutting tools (hobby knives) as they are surgically sharp. Always put the cap on when you are not cutting. Dispose the used blades after wrapping it with multiple layers of tissue paper.
2. If the tip of glue bottle (particularly CA glue) is clogged and/or if you are cutting the tip for use, point the tip away from your (and your friends’) eyes during cutting and squeezing the bottle.
3. Be careful when using Dremel rotary tool and make sure that the drill bit/cutting disc is safely tightened before turning it on.
4. Keep your workbench and work shop area clean and free of sawdust, shavings, and misplaced tools. Keeping the workbench clean is the first and most important step to keeping it safe.
5. Covering iron should be kept on its metal stand and turned off when not in use.
6. Students should NOT operate the laser cutter and circular saw without first taking proper training from the instructor.

Specific Safety Requirements for Testing Electric Motor with Propellers
These tests (in lab and in field) involve propellers rotating at high RPMs and therefore require the following safety measures
1. Tie back hair, secure loose clothing, remove dangling jewelry.
2. Never stand in front of the propeller nor in the propeller arc.
3. Students should not operate electric motor unless at least one other person is present in the lab.
4. Never charge LiPo batteries unattended.