



LOCKHEED MARTIN



3D SOLIDWORKS



AEROSPACE
Center For Excellence

FlyLakeland
Lakeland Linder
International Airport

Welcome Packet

SAE AERO DESIGN®

East 2020



East 2020

Schedule for Friday, March 6th, 2020 Florida Air Museum Campus

- 7:15 AM – Inspection Team Volunteers meeting
- 7:30 AM – Site opens for teams
- 7:30 AM – Pre-inspection tables open
- 8:00 AM – 5:00 PM: Team Registration
- 8:00 AM – 5:00 PM: Technical Inspections
- 8:00 AM – 8:45 AM: Oral Presentation Judges meeting
- 9:00 AM – 4:45 PM: Oral Presentations
- 10:00 AM – 2:00 PM: Paradise Field Available for Practice
- 5:30 PM – 6:15 PM Welcome Ceremony and **Mandatory** Safety Briefing for all team members: **ALL** team members must attend.





LEGEND	
1	MUSEUM BRIEFING ROOM
2	CROSSFIELD CLASSROOM #3
3	CROSSFIELD CLASSROOM #4
4	PIEDMONT MEETING HALL
5	DAVIS MEETING HALL
6	EICKHOFF 2 ND FLOOR
7	BEUHLER – REPAIR STATION
8	PAVILION REGISTRATION (AM) / SATURDAY OPS AND SAFETY BRIEFING (PM)
9	PREINSPECTION
10	FLORIDA AIR MUSEUM - INSPECTION
11	PARADISE AIRFIELD



PRESENTATION SCHEDULE

Presentation Schedule (6 Separate Rooms)						
	Museum Briefing Room	Crossfield Classroom 3	Crossfield Classroom 4	Piedmont Meeting Hall	Davis Meeting Hall	Eickhoff Second Floor
9:00	201 Georgia Institute of Technology	1 Univ of Manitoba	3 Univ of Virginia	4 West Virginia Univ Inst of Tech	11 Universidade Federal do Vale do São Fran	12 Universidade Estadual Paulista Julio de
9:30	14 Ecole Polytechnique Montreal	202 Wroclaw University of Technology	15 Concordia University	16 Univ of Michigan - Ann Arbor	17 Brno University of Technology	18 New Jersey Institute of Technology
10:00	19 Politechnika Poznanska	20 Texas A & M Univ - College Station	211 Inst Tech De Aeronautica	21 IPN - ESIME UP Ticomán	22 Univ of North Florida	24 Dwarkadas J Sanghvi College of Engr
10:30	BREAK: 10:30 - 10:45 (10:30 AM - 10:45 AM)					
10:45	215 Cedarville Univ	25 Univ of Saskatchewan	26 Vellore Institute of Technology	212 Concordia University	27 MIT World Peace University	28 Ohio Northern Univ
11:15	29 Univ of Pennsylvania	218 Université Laval	33 Robert Morris University	34 Rajiv Gandhi Institute of Technology	213 McGill Univ	35 Polytechnic Univ of Puerto Rico
11:45	37 Florida A&M Univ/Florida State Univ	39 Univ of New Hampshire	219 University of Western Ontario	42 K.J.Somaya College of Engineering	46 Czech Technical Univ of Prague	214 Univ of Michigan - Ann Arbor
12:15	LUNCH BREAK: 12:15 - 13:00 (12:15 PM - 1:00 PM)					
13:30	224 Hindustan University	47 MLR Institute Of Technology	49 Catholic Univ of America	221 Inst of Aeronautical Engrg Hyderabad	302 Georgia Institute of Technology	303 Wroclaw University of Technology
14:00	304 Manipal Institute of Tech	225 California State Univ - Northridge	311 Universidade Federal de Sao Joao del Rei	312 Dwarkadas J Sanghvi College of Engr	222 Vellore Institute of Technology	313 Univ of Manitoba
14:30	314 Florida International Univ	315 Concordia University	228 Univ of Delaware	319 Ecole Polytechnique Montreal	320 Univ of Ottawa	223 Fr Conceicao Rodrigues College of Engr
15:00	BREAK: 15:00 - 15:15 (3:00 PM - 3:15 PM)					
15:15	240 Universidad Autonoma de Baja California	323 Michigan Tech Univ	324 Brigham Young Univ - Idaho	231 Universidad Nacional Autónoma de México	325 Universidad Metropolitana	238 Kennesaw State University
15:45	330 McGill Univ	332 Universidad Autonoma De Nuevo Leon	336 Kennesaw State University	338 Vellore Institute of Technology	233 Univ of Tennessee - Martin	342 Politechnika Poznanska
16:15	343 New Mexico Inst of Mining & Tech	<p style="text-align: center;">Schedules are Non-Negotiable. Missing a Presentation Appointment Results in <u>Disqualification</u>.</p>				
16:45	#N/A					



INSPECTION SCHEDULE

Inspection Appointments		
Time	Team Number	Team Name
8:00 AM	224	Hindustan University
	47	MLR Institute Of Technology
	49	Catholic Univ of America
	221	Inst of Aeronautical Engrg Hyderabad
8:15 AM	302	Georgia Institute of Technology
	303	Wroclaw University of Technology
	304	Manipal Institute of Tech
	225	California State Univ - Northridge
8:30 AM	311	Universidade Federal de Sao Joao del Rei
	312	Dwarkadas J Sanghvi College of Engrg
	222	Vellore Institute of Technology
	313	Univ of Manitoba
8:45 AM	314	Florida International Univ
	315	Concordia University
	228	Univ of Delaware
	319	Ecole Polytechnique Montreal
9:00 AM	320	Univ of Ottawa
9:15 AM	223	Fr Conceicao Rodrigues College of Engrg
	240	Universidad Autonoma de Baja California
9:30 AM	323	Michigan Tech Univ
	324	Brigham Young Univ - Idaho
	231	Universidad Nacional Autónoma de México

Schedules are Non-Negotiable.

Missing an Appointment may Cause Missing Flight Round 1



INSPECTION SCHEDULE CONTINUED

Inspection Appointments

Time	Team Number	Team Name
9:45 AM	325	Universidad Metropolitana
	238	Kennesaw State University
10:00 AM	330	McGill Univ
	332	Universidad Autonoma De Nuevo Leon
10:15 AM	336	Kennesaw State University
	338	Vellore Institute of Technology
10:30 AM	233	Univ of Tennessee - Martin
	342	Politechnika Poznanska
10:45 AM	343	New Mexico Inst of Mining & Tech
	201	Georgia Institute of Technology
11:00 AM	1	Univ of Manitoba
	3	Univ of Virginia
11:15 AM	4	West Virginia Univ Inst of Tech
	11	Universidade Federal do Vale do São Fran
11:30 AM	12	Universidade Estadual Paulista Julio de
	14	Ecole Polytechnique Montreal
12:15 PM	202	Wroclaw University of Technology
	15	Concordia University
12:30 PM	16	Univ of Michigan - Ann Arbor
	17	Brno University of Technology
12:45 PM	18	New Jersey Institute of Technology
	19	Politechnika Poznanska

Schedules are Non-Negotiable.

Missing an Appointment may Cause Missing Flight Round 1



INSPECTION SCHEDULE CONTINUED

Inspection Appointments		
Time	Team Number	Team Name
1:00 PM	20	Texas A & M Univ - College Station
	211	Inst Tech De Aeronautica
1:15 PM	21	IPN - ESIME UP Ticoman
	22	Univ of North Florida
1:30 PM	24	Dwarkadas J Sanghvi College of Engrg
	215	Cedarville Univ
1:45 PM	25	Univ of Saskatchewan
	26	Vellore Institute of Technology
2:00 PM	212	Concordia University
	27	MIT World Peace University
2:15 PM	28	Ohio Northern Univ
	29	Univ of Pennsylvania
2:30 PM	218	Université Laval
	33	Robert Morris University
2:45 PM	34	Rajiv Gandhi Institute of Technology
	213	McGill Univ
3:00 PM	35	Polytechnic Univ of Puerto Rico
	37	Florida A&M Univ/Florida State Univ
3:15 PM	39	Univ of New Hampshire
	219	University of Western Ontario
3:30 PM	214	Univ of Michigan - Ann Arbor
	46	Czech Technical Univ of Prague
	42	K.J.Somaiya College of Engineering

Schedules are Non-Negotiable.

Missing an Appointment may Cause Missing Flight Round 1



DESIGN WORKSHOP

Friday March 6, 2020 9:00 AM & 1:00 PM

MATHWORKS

Success in Formula Student – How Modeling and Simulation Can Help

Modeling and Simulation help you gain insights into your design while saving time and money! Learn how MathWorks tools can help you model systems, optimize and tune designs, and win! This session will introduce you to using different MathWorks tools such as Simulink, Simscape, and Aerospace Blockset.

Presenter: Connell D'Souza, Student Competition Technical Evangelist, MATHWORKS

TAKEOFF

Takeoff - Modeling the Physics That Separates Airplanes From Cars

Elevate your performance analysis with data! Learn to use MATLAB to incorporate your performance data into a physics-based simulation of acceleration, rollout, and takeoff. In a competition that encourages teams to maximize their payloads, higher fidelity tools and understanding will show you just how far you can push the envelope!

Presenter: David Moroniti, SAE Aero Design Rules Committee

MASS PROPERTIES

Mass Properties - Weight Management and Optimization, the Ultimate Balancing Act

Learn about and get comfortable with one of the most critical properties required for successful aircraft design. Understanding weight and mass in aircraft design will help you design efficient and effective vehicles. Mass properties influence all aspects of aircraft design, control, manufacture, and maintenance. Be prepared to tackle the sometimes confounding world of weight balance and the effects on stability. Be the weight czar on your next project!

Presenter: Rick Buickel, Mechanical Design Chief Engineer, LMCO

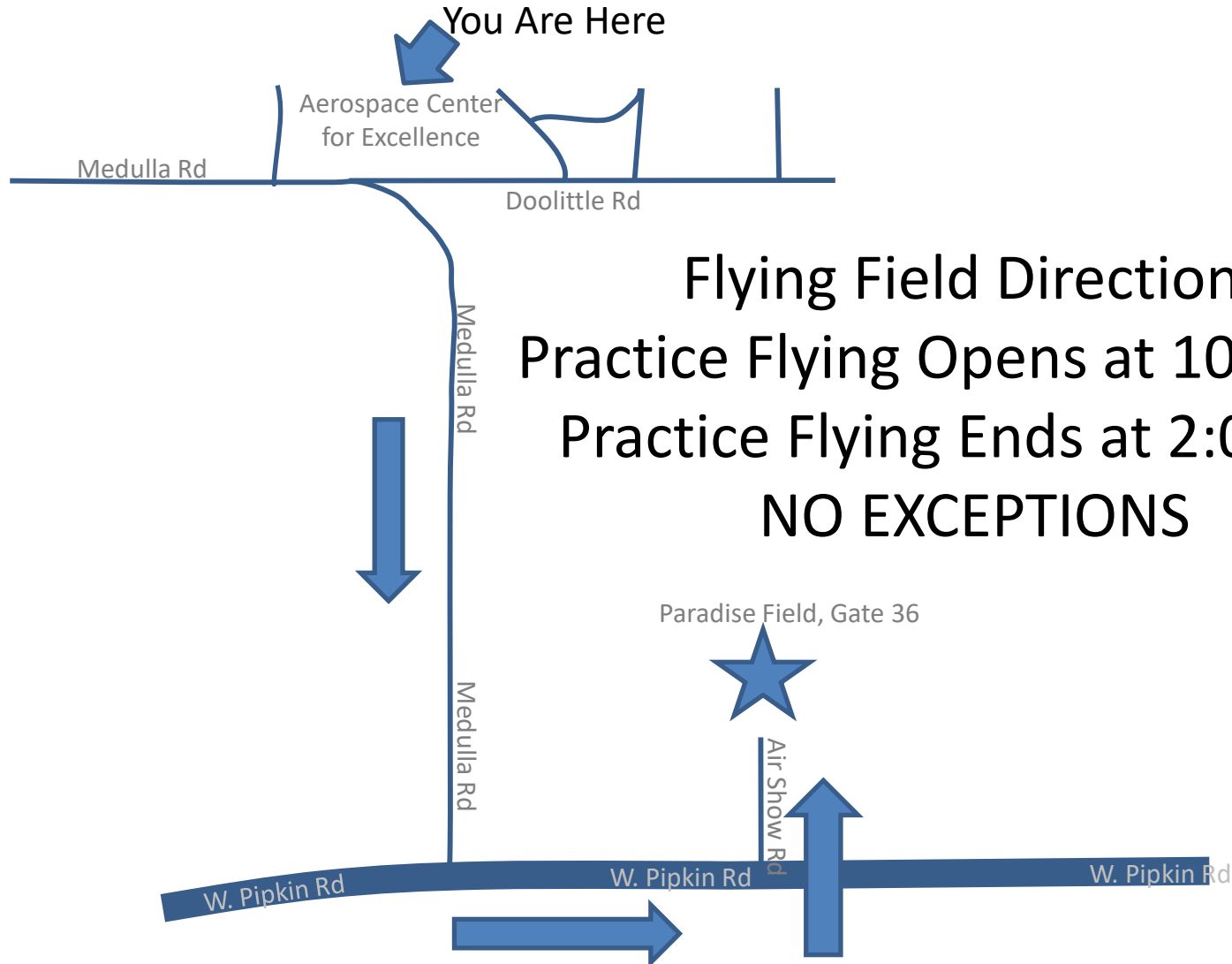
2 Sessions. Space is Limited Sign Up on Eventbrite!



MANDATORY SAFETY/OPS BRIEFING

- Starts at 5:30 PM in the Pavilion
- Topics Include:
 - Flight Operations
 - Scoring Process
 - Safety

Attendance is Mandatory, Information will not be repeated





US FAA drone registration

- **All Aero Design teams:** All teams, including non-US based teams **must** register their aircraft via the FAA web site and follow all FAA requirements. The FAA drone Registration web site now accommodates non-US based registrations.



East 2020

Local Hobby Shops:

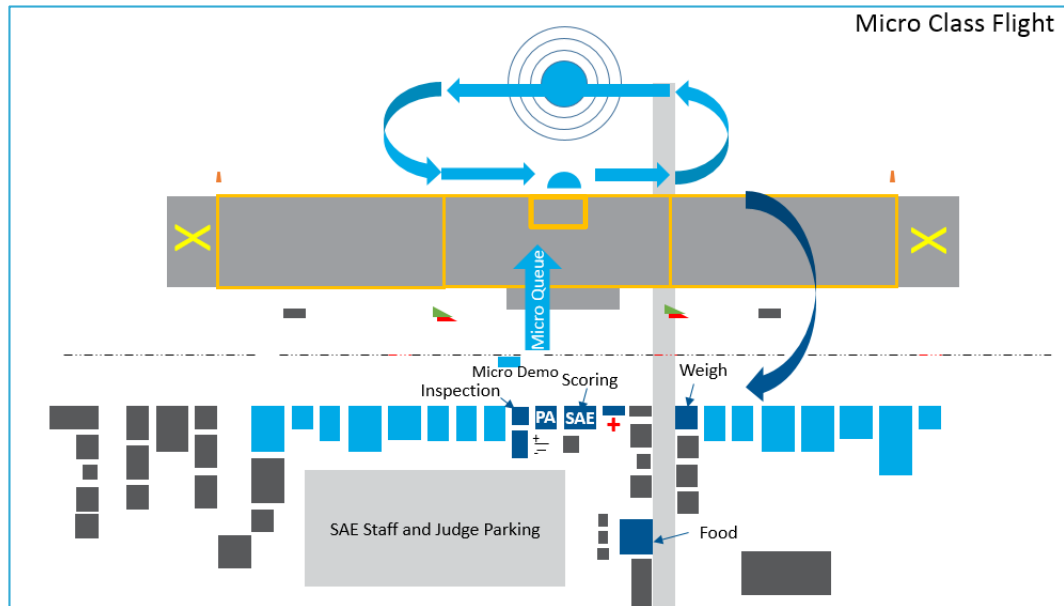
- **Hobby Town USA:** Regency Square, 2488 W Brandon Blvd
Brandon, FL 33511
p.(863)655-6366
- **Graves R/C Hobbies:** 4814 N Orange Blossom Trail
Orlando, FL 32810
p.(407)294-5699
- **Colonial Photo & Hobby Inc.:** 634 N Mills Ave
Orlando, FL 32803
p.(407)841-1485

FLIGHT OPS SUMMARY

- Teams must have a Flight Card to enter the Flight Queue
- Flight Cards are Available at the SAE Desk
- Flight Queue will Close 5 minutes after Last Call for the current competition class
- At the Last Call the next competition class Flight Queue opens



MICRO FLIGHT OPS SUMMARY

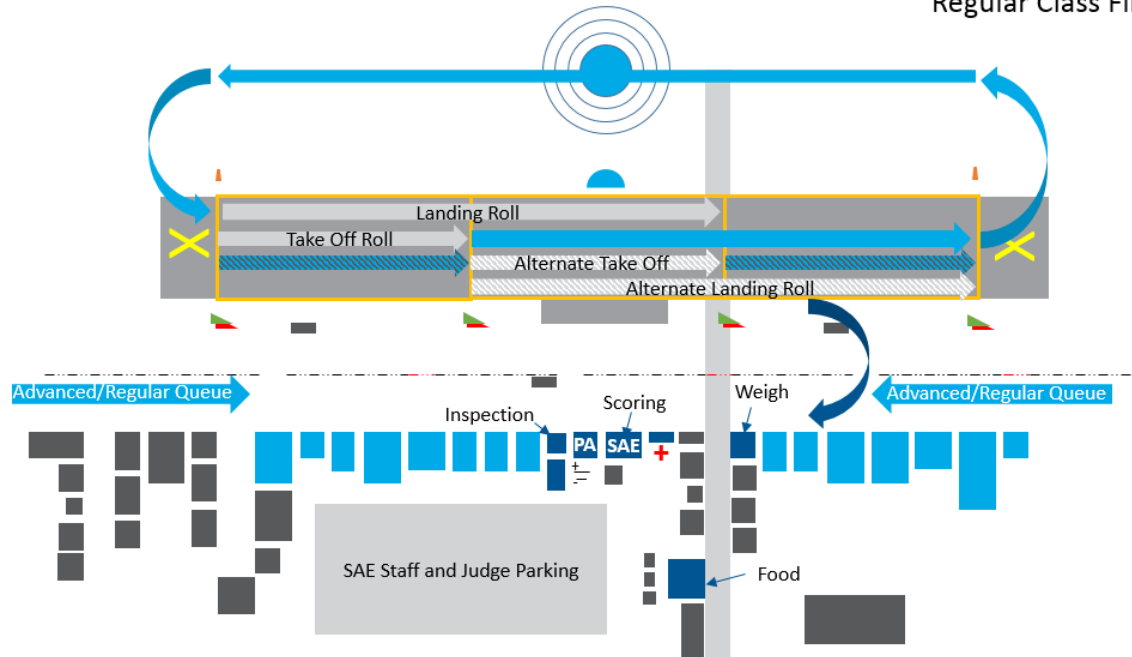


- Take-Off Time: 60s
- Land in same direction as take-off on Pavement.
- Remain within designated 8' X 8' Launch Area. Hand Launch Only. Running Prohibited.
- Safety Glasses & Hard Hat Required for Launcher



REGULAR FLIGHT OPS SUMMARY

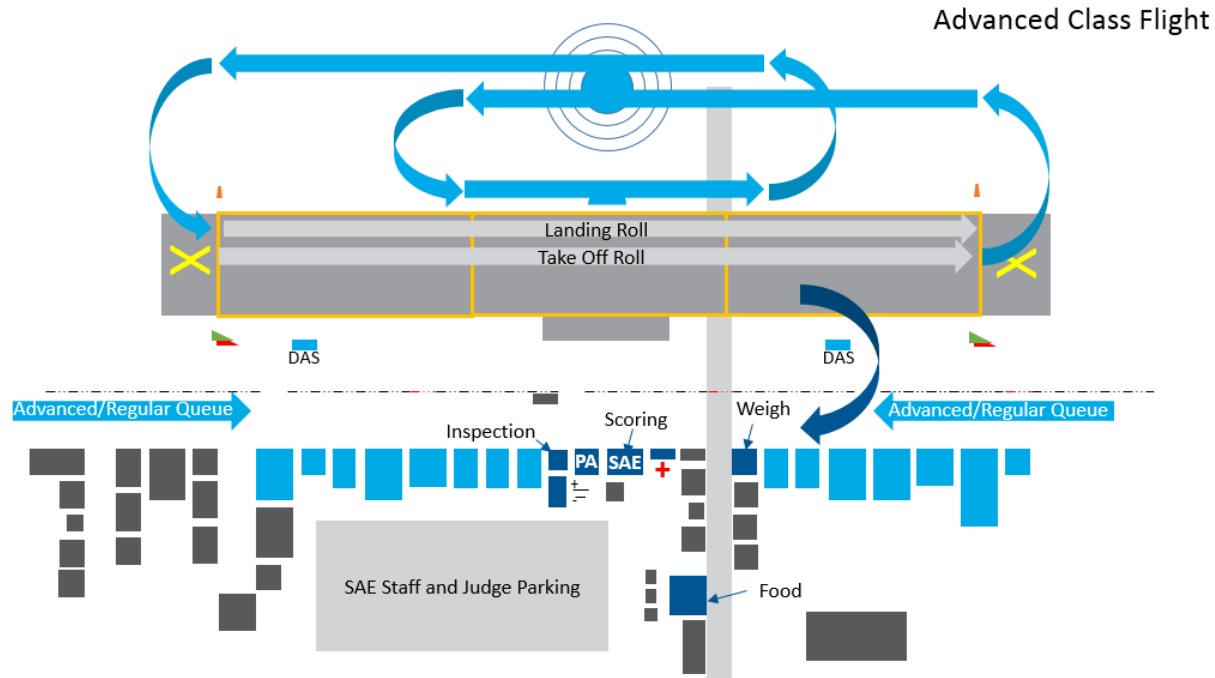
Regular Class Flight



- Take-Off Time: 120s
- Land in same direction as take-off on Pavement.
- 100 ft take-off zone. One take-off allowed. Aircraft leaving pavement is a take-off.



ADVANCED FLIGHT OPS SUMMARY



- Take-Off Time: 180s
- Land in same direction as take-off on Pavement.
- Declare Payload Release Approach Direction.
- CDA Release >200 ft from Landing Zone



POST-FLIGHT OPS SUMMARY

- Your flight steward to meet you at the aircraft.
- Unplug your arming plugs as soon as possible for all classes!
- Report to weigh-in station if flight is successful.
- Do not disassemble aircraft until told to do so.