



~ 2017-2018 FTC Kickoff ~

~~ Saturday, Sep 9, 2017 ~~

**Location:**

North Carolina A&T State University, Greensboro  
Academic Classroom Building

**Directions:**

Simply google

*"directions A&T academic classroom building" or  
"map A&T academic classroom building".*

A link to the campus map is also located on the  
NC FTC State website at

<http://www.ncflandftc.com/who-is-nc-at.html>.

It is the **BLUE** building #68.



**North Carolina  
Agricultural and Technical  
State University**<sup>TM</sup>

## Parking:

Park in any of the surrounding lots but do not park in any Reserved or Handicapped spots.



## Sponsors:



## Logistics:

The 2017-2018 FTC kickoff is held at North Carolina A&T State University in Greensboro. The Kickoff and Workshops are free and open to the public, but we need all teams who plan to attend to sign up and register to help us with the planning of the event. The deadline to register is Wednesday, September 6th.

The link to the registration form is located on the state website at <http://www.ncfillandftc.com/ftc-kickoff.html>.

If you have trouble reaching the registration page, contact the NC FTC Event Manager, Shayla Sharpe, at [info@nc-ftc.com](mailto:info@nc-ftc.com).

As shown in the schedule below, Check-in starts at 8:30 AM followed by the Welcome at 9:00 AM in the auditorium. Room 107 will also be provided as an “overflow” room. At 9:15 AM, everyone will fan out into the different workshops which start at 9:30 AM.

All sessions are planned for 40 minutes with 5 minutes to change rooms. Please move swiftly at these designated times so we can stay on schedule.

After the reveal of the game, everyone will have access to the new game field. At this time, you are also free to leave and start planning for this exciting FTC season.

## Schedule:

8:30am - Check-in, lobby of the Academic Classroom Building

Time	Auditorium 101	Room 109	Room 107	Room 108	Room 209	Room 308	Room 309	Room 310
9:00-9:15	Welcome	Welcome						
9:30-10:10 Session 1	Java and Android Studio	Basic Hardware Options	Drive Trains, Designs and Decisions	Rev Robotics Expansion Hub		Interview Skills	Behind the Curtain	Developing a Performing FTC Team
10:15-10:55 Session 2	Java and Android Studio	Basic Hardware Options	3D Computer Modeling	Configuring Modern Robotics HW and SW	Game Strategy	Judging 101	Tournament Day	Coaching and Mentoring Round Table
11:00-11:40 Session 3	Advanced Programming	Robot Design	3D Printing	HW, SW and Field Inspection	Worlds Q&A	Engineering Notebook	Outreach	Fundraising and Grant Writing
11:45-12:15	Game Reveal	Game Reveal						
12:15--2:00	Game Field Access							

## Which Workshops Should I Attend?

Each workshop is listed below with a description, the presenter and an email contact. We encourage teams to do their best to get as much coverage at the workshops as possible: divide and conquer with students and mentors alike.

### Workshop Descriptions:

#### **3D Computer Modeling** - Room 107, Session 2 - 10:15

**FTC Team 11588 - Deus Ex Machina - Katharine Priu** ([priuk19293@student.cghsnc.org](mailto:priuk19293@student.cghsnc.org))

**Oishi Ghosh** ([ghosho20494@student.cghsnc.org](mailto:ghosho20494@student.cghsnc.org))

Learn the basics of 3D Computer Modeling using Creo Parametric.

---

#### **3D Printing**- Room 107, Session 3 - 11:00

**FTC Team 5795 - Back to the Drawing Board - Michael Fei, Ryan Townsend**

([ftccoach@ecgrobotics.org](mailto:ftccoach@ecgrobotics.org), [murtuza\\_ha@hotmail.com](mailto:murtuza_ha@hotmail.com))

Learn the basics of 3D printing and how to utilize one of the most versatile and valuable tools available in robotics. Learn the pros and cons, dos and don'ts while seeing the potential of 3D printing.

---

#### **Advanced Programming** - Auditorium 101, Session 3 - 11:00

**FTC Team 5064 - Aperture Science**

**Coaches Joel Hollingsworth and Jochen Fischer** ([jochen.elon@gmail.com](mailto:jochen.elon@gmail.com))

Take your programming skills to the next level. Learn how to structure and organize your code.

Download the latest 3.1 SDK with many great features to make coding a breeze. Add complexity to both your autonomous and teleop programs with well written and scalable code. This session will use Android Studio, Java and Github

---

#### **Basic FTC Hardware Options** - Room 109, Session 1 - 9:30 + Session 2 - 10:15

**John Toebes, Coach FTC Team 2901/11588 - Purple Gears/Deus Ex Machina** ([john@toebes.com](mailto:john@toebes.com))

Tetrix, Actobotics and Matrix and More - Up close look at the FTC hardware options available, along with discussions about how to get the most out of the hardware to optimize your robot's performance. In addition, best practices for rock solid USB connection and battery management will be discussed.

---

#### **Behind the Curtain** - Room 309, Session 1 - 9:30

**Phil Salazar** ([kodashiku@gmail.com](mailto:kodashiku@gmail.com)) and **Dr. Kory Bennett** ([firstrob@ncat.edu](mailto:firstrob@ncat.edu))

See what it takes to be a volunteer at an FTC Tournament. Ever thought of taking on a new role in FTC as a technical volunteer, referee or judge? Learn what it takes to tame the magic of the systems you see on the screen (field management, scoring), be on the action packed field as a referee or get the deepest insights into all teams as a judge.

---

## **Coaching and Mentoring Round Table - Room 310, Session 2 -10:15**

**The Forge Initiative - Linda Whipker** ([linda.whipker@theforgeinitiative.org](mailto:linda.whipker@theforgeinitiative.org))  
**and Rob Mackie** ([rob.mackie@theforgeinitiative.org](mailto:rob.mackie@theforgeinitiative.org))

Whether you're a rookie coach or a veteran with many years of experience, we can all learn a lot from other each other. All are invited to share their wisdom on what worked or didn't work in this open conversational forum. A great place to network and connect with other coaches and mentors.

---

## **Configuring Modern Robotics HW and SW - Room 108, Session 2 - 10:15**

**FTC Team 8569 - RoboKnights** ([bob@roboknights.net](mailto:bob@roboknights.net))

Learn how to configure the Modern Robotics hardware and software to drive your robot successfully at a tournament. We will cover the basic wiring of the MR Controllers and show how to configure the hardware on the motors, servos and sensors on the phone. Finally, we'll take a look at how the hardware is accessed from a Java program. To get the most of this workshop, teams can bring their own phones to the HW&SW session.

---

## **Developing a Performing FTC Team - Room 310, Session 1 - 9:30**

**The Forge Initiative - Linda Whipker** ([linda.whipker@theforgeinitiative.org](mailto:linda.whipker@theforgeinitiative.org))  
**and Rob Mackie** ([rob.mackie@theforgeinitiative.org](mailto:rob.mackie@theforgeinitiative.org))

Creating an environment that results in a strong, positive team culture doesn't just happen. We'll talk about some of the cutting-edge learning models such as growth mindset, SDT and grit and how they are applicable to FTC teams. Come share some of your team's best practices for developing a team environment that is positive and helps the team work at a high performing level.

---

## **Drivetrains, Designs and Decisions: Building the Best Drivetrain for the Game**

**Room 107, Session 1 - 9:30**

**FTC Team 731 - Wannabee Strange - Kelvin Limanto, DJ Moore, Eric Zang, Hans Oh**  
([ftccoach@ecgrobotics.org](mailto:ftccoach@ecgrobotics.org), [murtuza\\_ha@hotmail.com](mailto:murtuza_ha@hotmail.com))

We are looking at different drive base designs and how they perform under different field conditions. The drive base will affect speed, mobility and traction on ramps or other obstacles. Different designs will require different software to operate them effectively.

---

## **Engineering Notebook - Room 308, Session 3 - 11:00**

**FTC Team 7300 - Guzzoline** ([team@ashebots.org](mailto:team@ashebots.org))

Documentation isn't just for Systems Engineers or English Majors, it's for everyone! Set your team up for success by using an engineering notebook to document early, document often, and document everything! Presented by the award winning Team 7300 - Guzzoline.

---

## **Fundraising and Grant Writing - Room 310, Session 3 - 11:00**

**Robert Barnette, ECG Robotics Treasurer** ([treasurer@ecgrobotics.org](mailto:treasurer@ecgrobotics.org)) **and**  
**Pamela Boerger, Former ECG Robotics Mentor** ([pamela@boergerfamily.com](mailto:pamela@boergerfamily.com))

Learn about available resources and how to raise money for your team.

---

## **Game Strategy - Room 209, Session 2 - 10:15**

**FTC Team 5064 Aperture Science - Tobias Fischer, Beren Hollingsworth** ([FTC5064@gmail.com](mailto:FTC5064@gmail.com))

Learn strategies to analyze FTC game challenges and tools to use at tournaments to help your team succeed.

---

## **Hardware, Software and Field Inspection - Room 108, Session 3 - 11:00**

**Thomas Barnette, Robot Inspector** ([tvbarnet@ncsu.edu](mailto:tvbarnet@ncsu.edu))

Learn what to expect and how to prepare your robot to pass the hardware and software inspections at FTC tournaments.

---

## **Interview Skills - Room 308, Session 1 - 9:30**

**Fiona Last-Powell, NC FTC Judge Advisor** ([fionalp63@gmail.com](mailto:fionalp63@gmail.com)) and

**Phil Salazar** ([kodashiku@gmail.com](mailto:kodashiku@gmail.com))

Great workshop for students and mentors to help prepare the team for interviewing with judges at a tournament.

---

## **Java and Android Studio - Auditorium 101, Session 1 - 9:30 + Session 2 - 10:15**

**FTC Team 11588 - Deus Ex Machina - Gillian Kearney** ([kearneyg20428@student.cghsnc.org](mailto:kearneyg20428@student.cghsnc.org))

Get started with Android Studio and Java. We will show you how to install Android Studio and the FTC Software Developer Kit (SDK) and how to get the PushBot or a similar robot running using the sample programs. Once this hurdle is taken, you can modify the software to fit an increasingly complex robot.

---

## **Judging 101 - Room 308, Session 2 - 10:15**

**Fiona Last-Powell, NC FTC Judge Advisor** ([fionalp63@gmail.com](mailto:fionalp63@gmail.com)) and

**Phil Salazar** ([kodashiku@gmail.com](mailto:kodashiku@gmail.com))

Learn the essentials of what goes on at an event with regards to judging and awards, and how to prepare.

---

## **Outreach - Room 309, Session 3 - 11:00**

**FTC Team 11588 Deus Ex Machina Madison Mitchell** ([mitchellm20343@student.cghsnc.org](mailto:mitchellm20343@student.cghsnc.org)) and

**Oliver McCann** ([mccanno18275@student.cghsnc.org](mailto:mccanno18275@student.cghsnc.org))

Learn the ins and outs of running a successful outreach event from planning to execution that is enjoyable both to the team and the community at large.

---

## **Rev Robotics Expansion Hub - Room 108, Session 1 - 9:30**

**Jochen Fischer, Coach FTC Team 5064 - Aperture Science** ([jochen.elon@gmail.com](mailto:jochen.elon@gmail.com))

Take an in-depth view at the new Rev Robotics hardware. Rookie teams will get a jump start configuring the hardware and software. Veterans can evaluate the pros and cons to make a decision whether to upgrade or not.

---

## **Robot Design - Room 109, Session 3 - 11:00**

**FTC Team 7105 - SWIFT, Coach Scot Padgett and team** ([scotpadgett@gmail.com](mailto:scotpadgett@gmail.com))

Engage your engineering mind with discussions about prototyping, testing, trouble-shooting, material selection, motors, gears, and building your FTC Robot to meet the objective.

---

## **Tournament Day - Room 309, Session 2 - 10:15**

**Sam Last, NC FTC Head Referee** ([epiclevelwarrior@gmail.com](mailto:epiclevelwarrior@gmail.com))

Scouting & Refereeing Learn the essentials of what goes on at an event, what you need to know and how to prepare.

---

## **Worlds Q & A - Room 209, Session 3 - 11:00**

**FTC Team 7444 - Sisters of the Motherboard** ([kristina.sorrells@salem.edu](mailto:kristina.sorrells@salem.edu), [kara.weimer@salem.edu](mailto:kara.weimer@salem.edu))

**FTC Team 5795 - Back to the Drawing Board**

**FTC Team 731 - Wannabee Strange** ([ftccoach@ecrobotics.org](mailto:ftccoach@ecrobotics.org), [murtuza\\_ha@hotmail.com](mailto:murtuza_ha@hotmail.com))

A record number of six FTC teams from North Carolina made it all way to FIRST Championship in Houston. Ask questions and hear first hand about the logistical challenges and the experience at the Super Regionals and Worlds from two of the teams.