



Career Academies
of the Wake County Public School System



WAKE COUNTY
PUBLIC SCHOOL SYSTEM

SPECIAL POINTS OF INTEREST

- Coordinator Note
- Fall 2014 Update
- Engineering Advisory Board
- Important Dates
- Field Trips, Job Shadowing, Internships
- Soft-skills workshops
- 2015-2016 Course Registration

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Southeast Raleigh Magnet

Engineering Career Academy Newsletter

VOLUME 2, ISSUE 2

JANUARY 2015

WOW! So much done, so much more to do.

From the Desk of the Coordinator

Last semester was a whirl wind for me. Transitioning from the classroom to an administrative position has been very eye-opening. I'm sorry that this is my first newsletter as I planned on having them come out once per month. Now that I know what I'm doing, I can see that there's so much more to do than just put out newsletters.

I completed the Career Development Coordinator class through the State. All CA-CDC's are required to become Career Development certified. This class included 3 full day face to face meeting with at least 90 hours of work to be completed throughout the 4 months as well as 30 hours of independent study. So as of December 2nd I am CDF Certified.

In this issue you will find out what we've done last semester concerning field trips, job shadowing, internships, recruitment trips, marketing, schedules and community outreach.

I have really enjoyed getting to know the Academy students, they are Great!! I look forward to helping them get through their high school years and on to college or the work force by having a great, well-rounded experience here at Southeast Raleigh.

To help with recruitment I have created Graduate Spotlight posters. Since I have been here since 1997 I have many connections with former students through Linked In and Facebook. I contacted a couple dozen and asked them how the engineering courses have helped them in their current position. I received many replies and have included a couple examples at the end of this newsletter.

The Academy advisory board would love to have more input from our Academy parents. Please consider getting involved so we can continue to do great things. See page 6 for examples of the many ways that you can get involved.

Thank you for your support,

John Geraghty

Key for the Academy Acronyms

PLTW - Project Lead the Way

IED - Introduction to Engineering Design

POE - Principles of Engineering

DE - Digital Electronics

AE - Aerospace Engineering

CEA - Civil Engineering and Architecture

EDD - Engineering Design and Development

NAF - National Academy Foundation

CDC - Career Development Coordinator

CA - Career Academy

CDF - Career Development Facilitator

Important Dates:

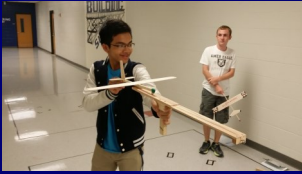
Registration for Rising 10th, 11th and 12th
February 2nd - 27th

Manpower Career Readiness Workshop
February 18th

Advisory Board Meetings:
February 20th
March 27th
April 17th
May 15th

Lenovo Day - April 13th

In the Classroom



Fall 2014 - Activities

On Tuesday, November 25th the Fall IED classes went on a field trip to NCSU for their **Freshman Engineering Design Day**. Our students walked around, talked to and looked at the State student's design projects including; Rube Goldberg, Concrete Canoe, Fountain, Bubble machine, Educational Computer Game, Arcade Game, Hovercraft and Precision Launcher. It was a great trip and showed our academy students what they might be doing in their first year in college.



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On Friday, December 5th, the POE class went on a field trip to the Harris Nuclear Plant in New Hill. Students were in a 45 minute classroom session which taught them about the history of the power plant and the process of nuclear engineering.



Did you know one small Uranium fuel pellet has the energy equivalent of 76 gallons of oil or 1 ton of coal?

The students then went on a tour of the failure analysis lab where engineers study objects that have failed and try to figure out why. It's like a crime lab for products. They saw an electron microscope and the machine lab where they cut and break objects. The highlight, at least for me, was a tour of an exact replica of the control room. It looks like something out of the 50's with a lot of dials, knobs and lights. Finally the students went on a scavenger hunt around the visitors center to learn about electricity, the security of the plant and nuclear energy in general.

Another field trip is planned for this semester's POE students.



NAF Update

January 15th was the deadline for submitting our Academy Assessment to NAF. The purpose of this self-assessment was to see how well we are meeting the requirements of NAF and to set goals for the coming year.

The academy assessment is structured around 4 main areas:

1. Academy Development and Structure
2. Advisory Board
3. Curriculum and Instruction
4. Work-Based Learning

After completing the assessment I realized that we are doing pretty well in some areas but we need to improve in other areas. For example we are meeting the requirement for the Academy Structure and Development.

Our curriculum and instruction is very strong because of PLTW and our awesome teachers.

Our advisory board is small compared to a lot of other academies so I would like to recruit more parents and industry leaders to serve on the board.

We need to develop better partnerships with businesses that will be willing to offer internships to our students.

Fall 2014 - Activities Continued

Also in December the POE class and the DE class went on a field trip to the Eaton corporation in N. Raleigh. The students rotated between 3 different activities: A plant tour, an informational session on the Eaton corporation and a career Q & A with various engineers. The students came away with the knowledge of even though Eaton is an electrical distribution plant, there are many different types of engineers and technicians who work there, not just electrical engineers.



Students are completing job shadowing and internship experiences. Remember, each academy student must complete a one day job shadowing experience each year. All of the forms are on the Edmodo page. Parents can join the Edmodo group too - ef37kq is the code.

We had one freshman, Gabriel Adamson, who completed a job shadowing experience and his internship already. Normally internships are done during the junior or senior years, however Gabriel had a great opportunity to work for Justice Theater Project that he couldn't pass up.

Part of the internship requirement is for the Academy Coordinator to make a site visit. Mr. Geraghty was invited to go to a showing of "The Black Nativity" in December and watched

Gabriel run the lights for the play. He was very impressed with Gabriel's knowledge base and the fact that the professionals he was working with treated him like a peer. The play was very good and his lighting received great reviews from a critic.



Upcoming Field Trips and Events

GE Aircraft Engine Assembly Plant Field Trip

Harris Nuclear Plant Field Trip

Schneider Electric Field Trip

Eaton Corporation Field Trip

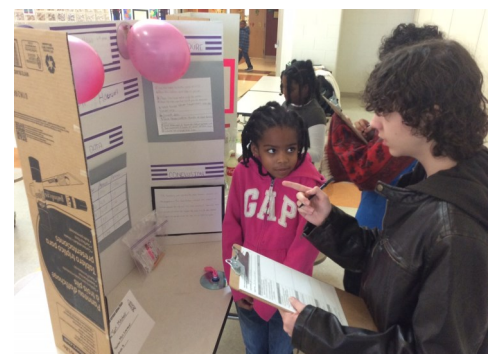
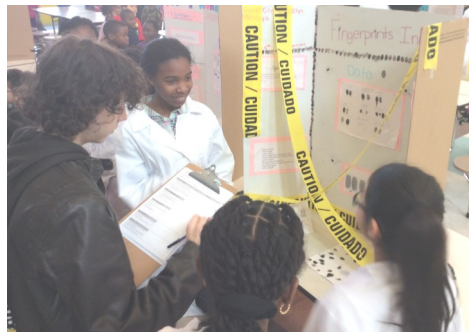
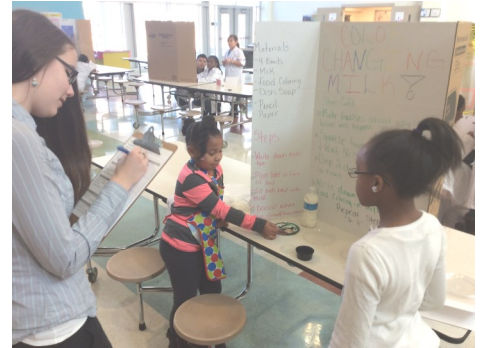
Fuller Elementary STEM Day

Walnut Creek Elementary STEM Career Fair

EDD Presentations

Fall 2014 - Activities Continued

On January 16th five Academy students went to Walnut Creek Elementary to judge science fair projects. Stefen Wharwood, Morgan Beatty, Reilly Gregorio, Ted Chua and Anneliese Koontz represented SRMHS very well.



Engineering T-Shirts

Show your Engineering Academy Pride, order your Engineering Academy T-Shirt Today.

THE 3 TOP REASONS TO ORDER A T-SHIRT

1. COMPETITIONS - We HIGHLY RECOMMEND that all TSA and VEX students purchase a shirt to wear to our competitions
2. FIELD TRIPS - We would also like students to have Academy T-Shirts to wear on Field Trips
3. BONUS POINTS - Friday's are becoming Engineering Academy Pride Days. Staff and Students are encouraged to wear their academy shirts every Friday. Students who do so will receive 1 point per week that they can apply to a Quiz, Exam or Project.

Shirts are \$15 each. Please bring your CASH payment to Mr. Beatty, Mr. Eckenrod, or Ms. Laing

Order on Mr. Beatty's Weebly's site - <http://mrbeattysclass.weebly.com/>

Front



Back



TSA, VEX, & RoboDogs

The TSA and VEX after school clubs are going well. They are both preparing for regional and state competitions coming up in February and March. The RoboDogs are almost half way through their build season. The competition was unveiled on January 3rd and they started designing right away.



Miscellaneous Information

Soft Skills Workshops

A representative from Manpower will be coming to Southeast on **February 18th** for some workshops on college and career readiness. Please remind your child to sign up in the Career Development Center (CDC) or online.

Lenovo Outreach

On April 13th Lenovo will send 200 employees from around the country for a half day community service here at Southeast. These employees will take part in either school beauti-

fication or career / college readiness programs. These programs will include mock interviews, resume writing and soft skills training.

Individual Student Conferences

Individual conferences with the Engineering Director are going well. Last semester Mr. Geraghty met with the Seniors, Juniors and Sophomores. Within the next couple of weeks he will meet with the Freshman.

Lenovo Career Day and Beautification - April 13th!

Here are some ways that you can volunteer:

Present to classes:

- A specific Engineering topic
- Their Career in Engineering
- Job Readiness - Interviewing, Resume writing
- Soft Skills

Help in class with projects.

Judge EDD projects - May 18th and 19th 6:30pm-8:30pm

Be a Mentor/e-mentor for internships, grad projects or other

Be a Tutor for students who are struggling

Participate in fundraising events

Chaperon field trips

Help with after school clubs - FIRST, TSA, Vex Robotics

Help with Lenovo Day - April 13th (That's a one time thing)

***Contact me if you are interested in being more of a part of SRMHS.
jgeraghty@wcpss.net***

Important Links and Information

Mr. Geraghty - jgeraghty@wcpss.net

Mr. Beatty - tbeatty@wcpss.net

Class Site - <http://mrbeattysclass.weebly.com/>

Mr. Eckenrod - eeckenrod@wcpss.net

Class Site - <http://mreclass.weebly.com/>

Mrs. Laing - dlaing2@wcpss.net

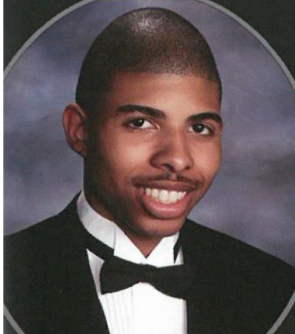
Class Site - <http://mrslaing.weebly.com>

Follow the Engineering Academy on Twitter
[@SEengAcademy1](https://twitter.com/SEengAcademy1)

<http://southeastraleigheaab.weebly.com/>



Graduate Spotlight

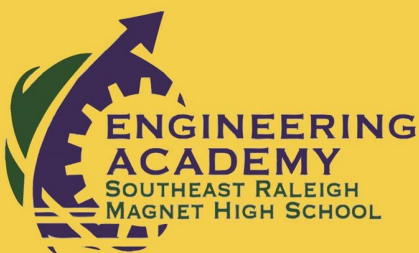


Cedrick Broadhurst - Class of 2008

Student - UNC-Charlotte

“I just graduated in December 2014 in Mechanical Engineering. The engineering courses that I took at SE did help me quickly learn new 3D CAD programs during my internships and Co-Ops.

“During college I was heavily involved with the National Society of Black Engineers which gave me a network of colleges to connect with in my field. I also took on a leadership role in the organization which got me some exposure to project management and executive experience.”





Graduate Spotlight



Chris Flaherty - Class of 2008

Technical Support Engineer

“Currently I am a Technical Support Engineer for 3D Systems Geomagic. It's a 3D printing company at large, but more specifically, I'm part of an engineering team that directly supports a suite of specialized 3D software known under the Geomagic brand.”

“The PLTW engineering courses at Southeast had me so well-versed in CAD that I took and passed the final for my college CAD course within the first few weeks of class.”

“CAD knowledge is now absolutely essential to my every-day work. I work with software which interfaces with 3D-scanners, allowing for the gathered data to be used for CAD-based mechanical quality inspection, or used to produce CAD models through reverse-engineering methods.”

“The software also ties into 3D printing, so understanding the process of mechanical design is key. And, I get to play with a lot of neat toys.”

