



College of Engineering
Office of the Dean

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November 20, 2017

Dear Friends, Engineers and Colleagues of North Carolina,

I hope this note finds you well and flourishing as we near the end of 2017.

Members of the regional steering committee for Future City – NC and I would like to invite you to participate as an engineering mentor and coach in this year's statewide Future City middle school program and competition.

The Engineering Place Outreach Staff at NC State College of Engineering supports the Future City program and its annual competition and has done so for more than seven years. During this time new and returning students have been excited to be part of a program that provides STEM-related scaffolding necessary for the creation of future engineers, scientists and technologically-aware citizens. For more than a decade, NC educators and mentors have witnessed the program in action as it engages NC kids in the STEM sciences (especially in engineering), brings young students alive, and builds soaring self-confidence.

To learn more about the [Future City Program and Competition](#), a national program from [DiscoverE](#), please visit these websites. For additional information regarding mentoring, please see Addendum A on the following page.

We are looking for engineering mentors across North Carolina to guide Future City student teams, to make connections to real-life experiences, to serve as a technical coach, and to help students translate the academic to the real world of engineering. To become a Future City mentor, please email Nancy Shaw at ncshaw@ncsu.edu for details regarding mentorship locations and needs across the state.

The NC Regional Future City Competition will be held at NC State University's McKimmon Center on Saturday, January 20, 2018. (Inclement weather date: Sunday, January 28, 2018). This year's theme is "The Age-Friendly City."

Sincerely,

A handwritten signature in black ink, appearing to read "Louis A. Martin-Vega".

Louis A. Martin-Vega, Ph.D.
Dean, NC State University College of Engineering

Addendum A:

Future City is a nationally supported program where students in middle school grades imagine, research, design, and create cities based on an annual theme they envision at least one hundred years in the future. The Future City program teaches 6th, 7th and 8th-grade students problem-solving techniques through hands-on, project- and problem-based learning. Students learn a problem-solving process called the engineering design process (EDP) as they imagine, plan, and create cities of the future. Working as a team, students, along with an educator and an engineering mentor, plan a city using the SimCity™ software. Students create a project plan, including goals, schedules, and reflections. They describe their research and implement solutions to engineering problems via their city essays. They plan and create tabletop scale models of their cities using recycled materials, and present their ideas before judges at the annual Future City – NC Competition. Additional competition highlights include participation in the Specialty Awards contest – a competitive process judged by engineering field experts, and focused on such themes as Best Use of Renewable Energy, Best Indoor Environment, Most Sustainable Environmental Practices, Best Management of Water Resources, and more!

Best of all, the program is FREE for all students attending NC schools, including public schools, home school environments or nationally, regionally or state-recognized youth-focused organizations such as the Boy or Girl Scouts, Boys and Girls Clubs and 4-H.

Students need only to be introduced to the question, “How can we make the world a better place?” to find meaningful ways to use what they are learning in other classes – such as math, science, and social studies – and apply this learning to not only to the creation of their Future City, but to everyday problem-solving and thinking. In addition, students learn that the engineering habits of mind as well as the “soft skills” – working with a team, integrating ideas that are not your own or that you may not necessarily like, working with people who may be very different from you in learning style, work style, background, and/or age, and communicating effectively – are just as, if not more important, than the actual project itself!

Benefits you will appreciate about the program include 1) the project is short-lived – 4 months or less – and can be offered in formal and informal settings; 2) You will receive the respect and awe of students (you might not see it, but it’s there!); 3) You are exposing students to the authentic use of the engineering design process and habits of mind through the expertise you share with the students in their project work; and 4) Best of all-YOU DON’T HAVE TO HAVE SUBJECT-SPECIFIC ENGINEERING EXPERTISE in order to make a difference! For example, if you are an environmental engineer, but the subject of the Future City theme that year is focused on earthquake proof cities, you have expertise to contribute that goes WAY beyond your daily work and degree! Students need to know that the habits of mind of an engineer, as well as the “soft skills”-working with a team, integrating ideas that are not your own or that you may not necessarily like, working with people who may be very different from you in learning style, work style, background, and/or age, and communicating effectively-are just as, if not more important, than the actual project itself! THIS is where you come in, no matter your engineering degree or subject expertise.