# **iCREAT: introduction to Coding, Robotics, Electronics, And Technology**

iCREAT project’s goal of creating a pathway to middle-skill positions for underrepresented high school and community college students through introducing them to Coding, Robotics, Electronics, and Technology was realized by creating two courses: iCREAT I and iCREAT II.

These multi-disciplinary and project-based college courses (3-credits each) help students learn to apply engineering and programming concepts to create a robot. Each class emphasizes the use of technology for solving problems facing today’s world to create a practical solution while keeping in mind the social justice context. Courses use an active, hands-on learning method of instruction. Problem-based projects, small group discussions and team collaboration facilitate the development of critical and creative thinking, problem solving, logical reasoning, and communication skills.

The summer courses are for high school juniors, seniors and just-graduated seniors and the Fall/Spring classes for MassBay Community College students.

What makes the iCREAT project unique is the integration of mentoring and career planning offered by our partners at MentorNet and Boston College. Students could connect with a Mentor from different fields within STEM and receive career guidance.

## **Mentoring**

MentorNet offered by Great Minds in STEM, was adapted to provide virtual mentoring for the high school and MassBay students enrolled in iCREAT classes.

We learned that mentor/mentee relationship needs more than a summer period (for high school students), so MentorNet created discussion modules to provide a structure for the mentoring sessions. The implementation and materials were evaluated and modified multiple times over the duration of the grant.   
Both mentors and mentees received content on the basics of mentoring as well as setting appropriate expectations and boundaries. Mentors also received guidance on storytelling so that their experience and knowledge could be communicated to their mentee in ways that would have an impact.

## **Career Counseling**

Comprehensive guidance can make all the difference between students who are ready for college and careers and students who are not. MassBay Community College has existing robust career counseling services that provide students with skills to help them plan their career goals and prepare themselves when seeking career opportunities.

In order to offer these services to high school students, our partners at Boston College’s school of education and counseling psychology program and their graduate students provided one-on-one career planning and counseling guidance. Students were provided with opportunities for career exploration via the use of an interest survey. Career exploration module is included in iCREAT I materials.

For more information go to: [www.massbay.edu/icreat](http://www.massbay.edu/icreat)

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