NSBE Jr.

What is NSBE?

Founded in 1975, the National Society of Black Engineers (NSBE) is one of the largest student-governed organizations based in the United States. With more than 31,000 members and more than 300 chapters in the U.S. and abroad, NSBE supports and promotes the aspirations of collegiate and pre-collegiate students and technical professionals in engineering and technology.

NSBE’s mission is “to increase the number of culturally responsible Black Engineers who excel academically, succeed professionally and positively impact the community.”

Current Challenges in STEM

Only 18 percent of black 4th graders and 14 percent of black 8th graders in the U.S. were proficient in math in 2013, according to the National Assessment of Educational Progress. Only 5.5 percent of black 8th graders in the U.S. completed calculus in 2005, and a mere 1.1 percent of the nation’s black college freshmen enrolled in engineering programs in 2010, according to a recent analysis conducted by NSBE. And then there’s this distressing fact from the American Society of Engineering Educators: the percentage of African Americans among U.S. engineering graduates has been declining for more than a decade and was only 4.2 percent in 2013.

NSBE’s Mission for Improvement

The Society has targeted an ambitious goal: to have the U.S. produce 10,000 African-American bachelor’s degree recipients in engineering per year by 2025, up from the current number of 3,620. NSBE launched its “Be 1 of 10,000” campaign on September 14, 2015, with an outreach to African-American 7th graders across the country. NSBE is asking the middle-school students to pledge to achieve academic excellence in subjects such as algebra, chemistry and physics, which are at the base of an engineering education. The Society will then provide online resources to help those students achieve their goals.
Why is the Pre-College Initiative Important?

The Pre-College Initiative (PCI) program is designed to stimulate the interest in science, technology, engineering, and mathematics fields, or STEM. The goal is to encourage students in grades K–12 to attend college and pursue technical degrees. Our PCI program provides activities to help students discover firsthand how engineering and technology relate to the world around them and discover the excitement of academic excellence, leadership, technical development and teamwork.

Benefits of NSBE Jr.

- College Admissions Preparation – Obtain materials to prepare you for the PSAT, SAT, and ACT
- Participate in technical competitions such as the Try-Math-A-Lon, MathCounts, Engineering Design Competition (Robotics-based), and the PCI Science Fair.
- Receive college application information including how to get into college, financial aid information, etc.
- Discounted Kaplan Test Prep services and materials. You can also receive a chance to win a free test prep class offered by Kaplan.
- Scholarships and Awards – Awarded to NSBE Jr. members in high school who have excelled academically and expressed an interest in pursuing a career in engineering and related fields.
- Subscription to The Bridge – the NSBE magazine that caters to pre-college students. (a $15 value)
- Discount Registrations for conferences and events including the Annual Convention/PCI Mini Conference held annually in March. Our conferences offer innovative programming designed to expose youth to science, technology, engineering & math (STEM)
- Leadership Development – Develop your leadership skills by serving in many chapter and some regional leadership roles
- Opportunity to meet other NSBE Jr. Collegiate and Alumni members from around the world who have walked in the footsteps that you intend to.
- Opportunities to be mentored and/or tutored by College Students or Technical Professionals currently working in a STEM field
**FIRST LEGO League Jr.**

(Grades K – 5)

Could building things with ordinary Legos equate to a scientific process? The Junior FIRST® LEGO® League (Jr.FLL®) captures the curiosity of the young child and creates engagement between that child with the wonders of science and technology. This program, for students grade K-3, features a real-world scientific concept to be explored through research, teamwork, construction, and imagination. Throughout the program year, adult coaches shepherd these inquisitive minds through the building of a moving model of LEGO® bricks and developing a Show Me Poster that illustrates their remarkable journey. NSBE’s Jr.FLL showcase takes place at the Annual Convention. Students must be a part of an active NSBE Jr. Chapter in order to participate.

**VEX IQ Challenge**

(Grades 3 – 8)

In the VEX IQ Challenge, presented by the Robotics Education & Competition Foundation, teams of students are tasked with designing and building a robot to play with other teams in a game-based engineering challenge. Classroom STEM concepts are put to the test as students learn lifelong skills in teamwork, leadership, communications, and more. NSBE’s VEX IQ Tournament will be held at Annual Convention.

**FIRST LEGO League**

(Grades 4 – 8)

How does an engineer approach problem solving? The FIRST® LEGO® League (FLL) introduces NSBE Jr. members to real-world engineering challenges by having them build LEGO-based robots to complete tasks on a thematic playing surface. During the course of the program year, FLL teams, guided by their imaginations and adult coaches, discover exciting new career possibilities. Through the process, they also learn to make positive contributions to society. NSBE’s FLL championship takes place at Annual Convention.
**Future City Competition**

(Grades 6 – 8)

Future City is a program that focuses on improving STEM skills in students by providing an exciting educational engineering experience that combines a stimulating engineering challenge with an inquiry-based application to present their vision of a city of the future. Middle school students will be asked to imagine, design, and build cities of the future. After designing a virtual city (using SimCity), researching, designing, and writing up their solution to a city-wide issue and building a scale model of their city, teams will present their vision to a panel of judges. NSBE’s Future City Competition will take place at Annual Convention.

**MATHCOUNTS**

(Grades 6 – 8)

How do you make math count for middle school students? NSBE’s MATHCOUNTS competition, a fun and challenging math program, is designed for teams of four middle school students to increase their academic opportunities. During the program year, MATHCOUNTS coaches provide thought-provoking, non-routine, fun problems to engage, challenge and make each participant a better problem solver. A circuit of exams is given to students at NSBE’s Annual Convention. Participants are provided access to an online mathematics resource to support their yearlong learning.

**MathVideo Challenge**

(Grades 6 – 8)

How do you get students excited about math? You empower them to tell its story. The Math Video Challenge is an innovative program that empowers students to be math teachers, video producers, actors and artists — all at the same time! Working together in teams, students create their own videos about math problems and the concepts associated with them. Formerly known as the Reel Math Challenge, the Math Video Challenge is designed to show students how engaging math is as a topic and as a hobby. During the year, students form teams of four to create a video that teaches the solution to one of the problems from the MATHCOUNTS School Handbook and also demonstrates how math applies to real life in application and concept.
**NSBE Jr. Explorer Technical Innovations Competition**

(Grades 6 – 12)

This annual national science fair program gives pre-college students the opportunity to compete in and explore science in all of its forms through projects and presentations. As they follow the program calendar, participants submit their project summaries and research papers for scoring. Projects and presentations are judged and scored at the national competition. Students conduct research for no more than 12 months before the national competition, which is held at NSBE’s Annual Convention.

**Ten 80 Racing Challenge**

(Grades 6 – 12)

What do racecars have to do with science? Everything! The Ten80 Student Racing Challenge: Ten80 STEM Initiative™ is a supplemental STEM curriculum of Ten80 Education’s National STEM League. Students form Ten80 Student Racing Challenge teams that use model (1:10 scale) radio--controlled cars and mimic professional motorsport teams. Students explore skills that are translatable to real life systems operations, the organization of real data, etc. But they don’t just explore this information. Instead they interact with data, going above and beyond following “build” directions. The product of their work is being “certified” in mechanical systems, data and problem solving! Students also spend the duration of the program year rebuilding the car with improved parts. Once the fundamentals of problem solving, data and mechanical systems, are mastered, they specialize in areas of personal interest, to include project management, marketing and business. The curriculum specifically addresses Enterprise and Data-Driven Design projects. NSBE’s Ten80 STEM Initiative finals take place at Annual Convention.

**Try-Math-A-Lon**

Grades 9 – 12

A triathlon may have little to do with math, but a Try-Math-A-Lon (TMAL) sure does. This yearlong tutoring program fosters good study habits for minority students, grooms them for success in STEM courses, helps prepare them for standardized exams such as the ACT and SAT, and promotes healthy competition and good sportsmanship. The TMAL competition is held between teams of four NSBE Jr. members and one alternate. Each team is composed of high school students in grades 9–10 or 11–12. Participants are provided access to an online mathematics resource to support their yearlong learning. This tool enables students to earn points during the program year, as they engage in various activities. Students compete at the national competition, which is held at NSBE’s Annual Convention.
**KidWind Challenge**

(Grade 9 – 12)

How much power can you really have? The KidWind Project is a team of teachers, engineers, practitioners and students who explore the science behind wind and other renewable forms of energy. The goal is to make renewable energy widely accessible through hands-on activities that are challenging and engaging while teaching basic science and engineering principles. Students dedicate their year of engagement to building a small turbine to produce as much power as possible. They are then tasked with thinking about the best construction techniques and the most innovative design to make their turbine operate. NSBE’s KidWind Challenge competition takes place at the Annual Convention.

**VEX Robotics**

(Grade 9 – 12)

Gaming has taken the world by storm, especially with engineers who live and play in that world. VEX Robotics Competition (VRC), an exciting engineering challenge presented in the form of a game, will provide your student with a new unconquered gaming frontier. With guidance from their advisors and mentors, students build innovative robots and compete during the school year in a variety of matches. In addition to learning valuable engineering skills, students model life skills such as teamwork, perseverance, communication, project management - and critical thinking. The VEX Robotics Competition also prepares students to become future innovators as 95 percent of participants report an increased interest in STEM subject areas and pursuing STEM-related careers. NSBE’s VEX Robotics championship takes place at the Annual Convention.
NSBE Jr Chapter Requirements

To charter and renew a NSBE Jr. Chapter, the following criteria must be met:

Have at least five (5) active members for NSBE Jr Chapters

Chapter must have the following chapter executive officers assigned and active in NSBECONNECT. Instructions on how to assign chapter officers within the NSBECONNECT are available for download.

- At least one Advisor (Adult. We recommend two)
- President
- Vice President
- Secretary
- Treasurer

National NSBE Jr. dues are $5 annually. A chapter may collect additional chapter dues to cover chapter costs.

Each advisor must have a profile in the NSBECONNECT system. If you do not have a profile, one will be created for you. We encourage advisors to become NSBE members; however, it is not a requirement.

Chapter Chartering

To begin the chapter charter process, follow the provided link listed below to petition a NSBE JR chapter

Each chapter must complete all relevant chapter information. This information includes but is not limited to chapter name, address, phone number, etc.

Each chapter must submit a Chapter Constitution by downloading a copy from the provided link. (A sample Constitution will be provided)

The chapter petition is reviewed and approved by NSBE World Headquarters Membership Staff.

Please contact the Membership Team at NSBE World Headquarters with any questions regarding the chapter charter process, or for assistance:

703.549.2207 prompt 1 or membership@nsbe.org
Chapter Resources

Chapter Charter Link:  https://www.jotform.com/92724215108149


Officer Assignment/On Line Chapter Management: http://www.nsbe.org/getmedia/c41d89c5-2403-49f7-b4b1-253e7b6b5a46/Chapter-officer-update-instructions-PDF.pdf.aspx