Attention high school students in grades 11 & 12 and ASU freshman & sophomores!

Are you curious?
Do you want to explore cutting edge science and technology with scientists?
Do you want to make a positive impact on the world?

If you answered "Yes," then BioXFEL Ed is right for you!

BioXFEL Ed meets Wednesdays, 3:45-6pm, at the Physical Science Labs at ASU Tempe campus.

Dates for Spring 2014

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<th>February</th>
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To apply please follow these three easy steps.

Step 1: Determine if you are eligible.
- High School students: Completed Algebra 1 & Biology with grade of B or better.
- College students: Grades B or better in all science, technology, engineering and mathematics courses completed, including high school Algebra 1 and Biology.

Step 2: Complete the BioXFEL Ed Student Application Packet.
The packet consists of the 2-page Student Application, the Student Participation Consent/Assent Form, and if you are under 18, the Parent Information Page and the 2-page Parent Permission Form.

Step 3: Fax, mail, or hand-deliver your completed application by Friday, February 3, 2014
(Pages 2 – 4 for all applicants, and page 6 for applicants under age 18.)

<table>
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<tr>
<th>FAX</th>
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<th>HAND-DELIVER</th>
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<tr>
<td>BioXFEL Ed</td>
<td>Arizona State University</td>
<td>BioXFEL Ed</td>
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<tr>
<td>Fax 480-727-0910</td>
<td>BioXFEL Ed – PRIME Center</td>
<td>Arizona State University</td>
</tr>
<tr>
<td></td>
<td>PO Box 875703</td>
<td>PRIME Center, Discovery Hall #212</td>
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<td>Tempe, AZ 85287-5703</td>
<td>250 E. Lemon St., Tempe, AZ 85287</td>
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Contact Information:

Carole Greens, BioXFEL Ed Education Director, (480) 727-0902; Cell (480) 390-0917; cgrenes@asu.edu
Mary Cavanagh, BioXFEL Ed Co-Director, (480) 727-0907; Cell (480) 273-7951; mcavanagh@asu.edu
Shelley Tingey, BioXFEL Ed Co-Director, (480) 727-0904; Cell (480) 273-1249; shelley.tingey@asu.edu
BioXFEL Ed Student Application Packet

Funded by the National Science Foundation

BioXFEL Ed Student Application Packet

(Student Application (1)
(Deadline for receipt of application is February 3, 2014)

Please send your completed application to:

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<td>Arizona State University&lt;br&gt;BioXFEL Ed – PRIME Center&lt;br&gt;PO Box 875703&lt;br&gt;Tempe, AZ 85287-5703</td>
<td>BioXFEL Ed&lt;br&gt;Azazria State University&lt;br&gt;PRIME Center, Discovery Hall #212&lt;br&gt;250 E. Lemon St., Tempe, AZ 85287</td>
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(Pages 2 – 4 for all applicants, and page 6 for applicants under age 18.)

Student Information

Student Name (Print): ___________________________________________ Age: ______________

Grade (circle one): HS Grade 11 HS Grade 12 ASU Freshman ASU Sophomore

School District or ASU Major ___________________________________________

Phone numbers (Home): __________________________ (Cell): __________________________

Permanent Address: ___________________________________________

Student Email ___________________________________________

Courses and grades in Science, Technology, Engineering, and Mathematics completed in the last two years. (Including high school Algebra 1 and Biology). Note: Grades must be B or better.

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Please attach additional pages if necessary.
Student Application (2)

We are requesting the following information from all applicants.

Gender:

_____ Female
_____ Male

Ethnicity:

_____ Hispanic or Latino
_____ Not Hispanic or Latino
_____ Unknown

Race:

_____ American Indian or Alaska Native
_____ Asian
_____ Black or African American
_____ Native Hawaiian or Pacific Islander
_____ White

Disability Status:

_____ Hearing Impaired
_____ Mobility/Orthopedic Impairment
_____ Visually Impaired
_____ Other
_____ None
Student Participation Consent/Assent Form

I wish to be considered for BioXFEL Ed, part of a research project at Arizona State University. As a member of BioXFEL Ed, I agree to:

1. Attend all meetings in the Arizona State University Tempe campus labs.
2. Be interviewed about my work on projects.
3. Be audiotaped/video taped during my work on projects.
4. Complete surveys about my interests in and knowledge of in science, technology, engineering and mathematics.
5. Provide data about my academic work, including course grades and results of standardized tests when requested by researchers.
6. Present my project work at the Showcase Open House.

Additionally,

- I understand that information from the activities above will be collected and may be used for research purposes.
- I understand that no names will be attached to any data used in reports, publications and/or presentations.
- I understand there are no foreseeable risks to participation other than the time commitment involved in participation.
- I understand that participation in BioXFEL Ed will not affect my grades in school.
- I understand that participation is voluntary and I may withdraw from BioXFEL Ed at any time without penalty.
- I understand that activities and interviews may be audio or video recorded.
- I understand that if I am not at least 18 years old, I must have permission from a parent or guardian to participate in BioXFEL Ed.
- I understand that by signing below, I am agreeing to participate in the BioXFEL Ed research study.

If you have questions concerning this research study, please contact the research team at 480-727-0907. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects’ Institutional Review Board through the ASU Office of Research Integrity and Assurance at 480-965-6788.

Student Name (Print) ________________________________________________________________

Student Signature ___________________________________________ Date ____________________
Dear Parent or Guardian,

Arizona State University is conducting a study to investigate ways to better prepare students for careers in science, technology, engineering and mathematics. **As a member of BioXFEL Ed**, your child will participate in science and technology explorations for eight (8) Wednesdays each semester, from 3:45-6pm at the Arizona State University labs located on the Tempe campus. There is no charge for participation. This is a scholarship program for all students selected to participate. Leaders of BioXFEL Ed are scientists and staff from ASU.

To evaluate this approach to improve learning, the project team will interview, audiotape and videotape your child about problem solving methods, and collect and analyze work produced in BioXFEL Ed meetings. School grades and scores on standardized tests will be collected from each participant and analyzed. Project staff will maintain materials and recordings, and our analyses of these, only for the duration of the project. No one other than the project team will have access to student school records collected or review the recordings and other materials collected. All data collected will be used for research purposes only.

Participation in BioXFEL Ed is voluntary. Your child may withdraw from BioXFEL Ed at any time. Participation or withdrawal will not affect your child’s grades in any school courses.

If you agree to have your child participate in BioXFEL Ed, we would like you to attend the end-of-semester Showcase Open House on April 30, where your child and other students will display and describe their projects.

If you have questions concerning this research study, please contact the research team at 480-727-0907. If you have any questions about your rights or your child’s rights as a subject/participant in this research, or if you feel you or your child have been placed at risk, you can contact the Chair of the Human Subjects’ Institutional Review Board through the ASU Office of Research Integrity and Assurance at 480-965-6788.

Thank you,

**Carole Greenes**, Education Director, BioXFEL Ed, Director, PRIME Center, ASU; Associate Vice Provost for STEM Education, ASU
Office (480) 727-0902, Cell (480) 390-0917, cgreenes@asu.edu

**Mary Cavanagh**, Co-Director, BioXFEL Ed, Executive Director, PRIME Center, ASU
Office (480) 727-0907, Cell (480) 273-7951, mcavanagh@asu.edu

**Shelley Tingey**, Co-Director, BioXFEL Ed, Program Manager, PRIME Center, ASU
Office (480) 727-0904, Cell (480) 273-1249, shelley.tingey@asu.edu

Arizona State University PRIME Center, Discovery Hall #212, 250 E. Lemon St.
PO Box 875703, Tempe, AZ 85287-5703
Parent Information and Permission Form
for Students Under the Age of 18

Child’s Name (PRINT) ________________________________ Age ________

Parent/Guardian Name (PRINT) ________________________________

Home Address, City, State, Zip_______________________________

Parent/Guardian Phone Numbers (Home) ___________________ (Cell) __________

Parent/Guardian Email _________________________________

Agreements:

1. Beginning February 19, 2014, my child will participate in BioXFEL Ed at the Tempe campus of Arizona State University, 3:45pm-6:00pm.
2. My child may be audio or videotaped during participation in project activities and one-on-one interviews.
3. My child will complete surveys about careers in science, technology, engineering and mathematics.
4. My child’s project logs and surveys, and other project work will be collected and analyzed.
5. My child’s course grades and scores on standardized tests scores may be shared with project staff.
6. My child may be contacted by research staff via email or phone after leaving the program and asked about BioXFEL Ed experiences.

I understand that researchers may collect data about my child’s academic work, but no names will be attached to any data that will be reported. Audio and videotapes, once analyzed, will be destroyed.

I understand that my child may withdraw at any time. Participation or withdrawal from BioXFEL Ed will not affect my child’s grades in any school courses.

I agree that my child, ________________________________, may participate in BioXFEL Ed activities.

Parent Signature ________________________________ Date __________