MSEIP Seminar for Parents and Guardians

*Encouraging and Empowering URM (especially women) to Pursue Engineering Education and Careers*

**Implementation Plan** - Through selected high schools and Community Centers.

- Only 11th and 12 Graders
- Students must be accompanied by parents/guidance
- Only students with an interest in Engineering & Technology education will be accepted for the workshop
- Only students considering Savannah State University as a possible choice for their college education will be accepted

**Selected High Schools/Community Centers (Possible Candidates)**

- Bluffton High School, Bluffton, Beaufort County, South Carolina
- Hardeeville High School, Hardeeville, Jasper County, South Carolina
- Beach High School, Savannah Georgia
- Savannah High School, Savannah, Georgia
- May Street YMCA
- Bradwell Institute, Richmond Hill, Liberty County, Georgia
- Other
MSEIP Seminar for Parents and Guardians
Seminar Presentations:

Engineering Technology Education
Alex Kalu/ Muhamad Mustafa

**Academic Preparation for Engineering Technology Education**
- Dismissing the myth
- Minimum Requirements
- Dedication vs. Super Ability

**(YES WE CAN, President Obama)**

**Financial Aids Opportunities for Engineering Education**
– The Federal Government to commit $22B (America Complete Legislation passed in Congress) to STEM Education

**Programs Accessible at HBCUs and MSIs only (PARTIAL LIST)**

<table>
<thead>
<tr>
<th>#</th>
<th>Program</th>
<th>Administering Agency/Sponsoring Agency</th>
<th>Amount paid to Student/Other Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DFBSSST Scholarship</td>
<td>Development Fund for Black Students in Science and Technology</td>
<td>Up to $2,000 per year for 4 years</td>
</tr>
<tr>
<td>2</td>
<td>NASA Science and Technology Institute Summer Scholars Program (NSTI SSP)</td>
<td>NASA/UNCF-SP</td>
<td>Paid 10 weeks summer intern</td>
</tr>
<tr>
<td>3</td>
<td>Mentorship for Environmental Scholars Program (MES)</td>
<td>Department of Energy (DOE)/UNCF-SP</td>
<td>Paid 10 weeks summer intern</td>
</tr>
<tr>
<td>4</td>
<td>Motivating Undergraduates in Science and Technology (MUST)</td>
<td>NASA/UNCF-SP</td>
<td>$10,000 Scholarship and paid 10 weeks summer intern</td>
</tr>
<tr>
<td>#</td>
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<td>Amount paid to Student/Other Benefits</td>
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<tr>
<td>----</td>
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<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>The Multicultural Undergraduate Internship Program</td>
<td>The Association for Women in Science (AWIS)</td>
<td>$3,500</td>
</tr>
<tr>
<td>2</td>
<td>Minority Access Internship Program</td>
<td>Minority Access, Inc</td>
<td>$390.00 - $450.00 per week; Travel expenses</td>
</tr>
<tr>
<td>3</td>
<td>Summer Research Program for Minorities and women</td>
<td>Lucent Technologies Bell Laboratories</td>
<td>Salary commensurate with Bell Lab employees, Free housing, Travel expenses</td>
</tr>
<tr>
<td>4</td>
<td>Women's Scholarships</td>
<td>Microsoft</td>
<td>Unspecified</td>
</tr>
<tr>
<td>5</td>
<td>Underrepresented Minority Scholarships</td>
<td>Microsoft</td>
<td>Unspecified</td>
</tr>
<tr>
<td>6</td>
<td>Mickey Leland Energy Fellowships</td>
<td>The U.S. Department of Energy's Office of Fossil Energy</td>
<td>$500 per week for 10 summer weeks, Travel expenses</td>
</tr>
<tr>
<td>7</td>
<td>The Technical Minority Scholarship Program</td>
<td>Xerox</td>
<td>$1,000 - $10,000</td>
</tr>
<tr>
<td>8</td>
<td>Summer Internships in Science and Technology for Minority Students at Fermilab</td>
<td>Fermi Lab)</td>
<td>$615 - $725 per week; Travel expenses; Housing allowance, more</td>
</tr>
<tr>
<td>10</td>
<td>Nuclear Regulatory Commission Historically Black Colleges and Universities Student Research Participation</td>
<td>Nuclear Regulatory Commission, ORISE</td>
<td>Summer and Semester Internships</td>
</tr>
<tr>
<td>11</td>
<td>Office of Civilian Radioactive Waste Management Minority Service Institutions Undergraduate Scholarship Program</td>
<td>Office of Civilian Radioactive Waste Management</td>
<td>Scholarships and Internships</td>
</tr>
<tr>
<td>12</td>
<td>The Technical Minority Scholarship Program</td>
<td>Xerox</td>
<td>$1,000 to $10,000 Depending on Tuition Balance</td>
</tr>
</tbody>
</table>
### Programs for Students in Engineering and Related Fields

(Partial List)

<table>
<thead>
<tr>
<th>#</th>
<th>Program</th>
<th>Administering Agency/Sponsoring Agency</th>
<th>Amount paid to Student/Other Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Summer Internship in Science and Technology (SIST)</td>
<td>Fermi Lab)</td>
<td>$615 -$725 per week; Travel expenses; Housing allowance, more</td>
</tr>
<tr>
<td>2</td>
<td>The DHS HS-STEM Summer Internship Program</td>
<td>The U.S. Department of Homeland Security (DHS); ORISE</td>
<td>$500 per week for 10 summer weeks, Travel expenses</td>
</tr>
<tr>
<td>3</td>
<td>General Scholarships</td>
<td>Microsoft</td>
<td>Unspecified</td>
</tr>
<tr>
<td>4</td>
<td>The DHS Scholarship and Fellowship Program</td>
<td>The U.S. Department of Homeland Security (DHS)</td>
<td>Full Tuition, Travel and Summer Intern</td>
</tr>
<tr>
<td>5</td>
<td>Energy Student Achievement Program</td>
<td>DOE</td>
<td>Summer and Semester Internships</td>
</tr>
<tr>
<td>6</td>
<td>National Energy Technology Laboratory Professional Internship Program</td>
<td>DOE</td>
<td>Summer and Semester Internships</td>
</tr>
<tr>
<td></td>
<td>Rail Engineering Scholarship</td>
<td>AREMA Educational Foundation</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

### Professional Development Opportunities for Engineering Technology Students

- Internships
- Corporative Education
- Research Training

### Compare and Contrast Engineering Technology and Engineering Science

<table>
<thead>
<tr>
<th>#</th>
<th>Parameter</th>
<th>Engineering Technology</th>
<th>Engineering Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Academic Rigor</td>
<td>Less rigorous</td>
<td>More Rigorous</td>
</tr>
<tr>
<td>2</td>
<td>Undergraduate Education</td>
<td>Less theoretical</td>
<td>More Theoretical</td>
</tr>
<tr>
<td>3</td>
<td>Practical Training</td>
<td>More Hands on</td>
<td>Less Hand on</td>
</tr>
<tr>
<td>4</td>
<td>Mathematical Ability Requirement</td>
<td>Requires math</td>
<td>Requires high math skill</td>
</tr>
<tr>
<td>5</td>
<td>Financial Support for Undergraduates</td>
<td>Highly available</td>
<td>Highly available</td>
</tr>
<tr>
<td>6</td>
<td>Average Time for Graduation</td>
<td>3 to 4 Years</td>
<td>4 to 5 years</td>
</tr>
<tr>
<td>7</td>
<td>Admission Requirements</td>
<td>Moderate</td>
<td>Very High</td>
</tr>
<tr>
<td>8</td>
<td>Availability of Job</td>
<td>Very High</td>
<td>High</td>
</tr>
<tr>
<td>9</td>
<td>Entry Salary</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>10</td>
<td>Job Designation</td>
<td>Engineer</td>
<td>Engineer</td>
</tr>
<tr>
<td>11</td>
<td>Availability at/through Savannah State University</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Engineering & Technology at Savannah State University,
Johnathan Lambright/ Kupuswami Jayaraman

Civil Engineering Technology
- ABET Accreditation
- Oldest in the State of Georgia
- Technically Current Curriculum
- Placement of Graduates (9 in every 10?)
- Highly Qualified and Competent Faculty
- Faculty Dedicated to Student Success

Electronics Engineering Technology
- ABET Accreditation
- Oldest in the State of Georgia
- Technically Current Curriculum
- Placement of Graduates (Almost 100%)
- Highly Qualified and Competent Faculty
- Faculty Dedicated to Student Success

Computer Science Technology
- Technically Current Curriculum
- Placement of Graduates (Almost 100%?)
- Highly Qualified and Competent Faculty
- Faculty Dedicated to Student Success

Emerging Technology Curricula
- Solar Energy Technology
- Environmental Engineering Technology
- Certificate Programs in Advanced Energy Technology and Environmental Technology

Georgia Tech Regional Engineering Program
- Offers Flexible and Alternative Engineering Education Opportunities
- Graduate with a GA Tech Degree Without Leaving Savannah

Other Pathways to Georgia Tech Degrees
- Regents Engineering Transfer Program
- 2+3 Engineering Program
General Attributes of the Department

- Small Class sizes
- Dedicated Faculty
- Individual Attention (You are not just a number)
- Warm and Friendly Atmosphere
- Long Tradition of Academic Excellence

Student Support Programs

- STEM 360
- PSLSAMP
- Other
Financial Aid and Other Resources at SSU Engineering, Muhamed Mustafa

SSU Engineering Programs Infrastructure
(List Laboratories) Surveying, Digital Communication, Electric Machinery, Programmable Logic Controllers, etc
(Insert Photos of Laboratories)
(List Research Centers) CAWTES, other

Academic Support Centers
(List Tutorial labs) STEM Center, CASTME Tutorial Center, Other

Professional Organizations
• American Society of Civil Engineers
• Institute of Electrical and Electronics Engineers (IEEE)
• National Society of Black Engineers (NSBE)
• Tau Kappa Pi Engineering Technology Honor Society

Scholarships and Other Financial Aids
(List of Scholarships)

Careers in Engineering & Technology,
Asad Yousuf/Babajide Familoni
The National Need for Engineers

- Job Projections – By 2010, one out of every four new jobs will be technically oriented.
- The US will require over 1,000,000 STEM professionals by 2015

Why We Must Become Part of the Solution

- To Stem Outsourcing of US Jobs
- Preserve Our Leadership in Technology
- Strengthen US Economic Competitiveness
- National Security

The National Statistics

Percentage in Overall Workforce vs. Percentage in STEM Workforce

- Women (50/19)
- African American (11/04)
- Hispanics (11/03)

Salary and job security

- In 2005, STEM graduates made over $50k per year while non STEM graduates made $29k per year
- Of the over 1,000,000 Technical (computer related) Jobs expected to come online by 2014, the US will graduate only 500,000 qualified persons for the jobs.
- By 2010, one of every four new jobs will be technically oriented.

Career Opportunities

- Solar energy (Current emphasis by President Obama)
- Rebuilding America’s infrastructure (Current emphasis by President Obama)
- Energy industry (Price of oil and energy economy)
- Environmental engineering (Current issues – climate change, et al)

SSU Engineering Track Record

- Highly Successful Former graduates
- Job placement record
The role of Parents,  
Henry Tailor/Johnathan Lambright

- Encourage Students to Take Advantage of Opportunities at SSU
- Assist SSU Faculty in Reaching Out to Students
- Encourage and Assist Students to Participate in SSU Programs Designed to Help Them Become Engineers
- Encourage Students to Do Their Best in School
- Assist Students in Making a Decision on College and Career Choices
MSEIP Scholars,
Alex Kalu/Asad Yousuf

How to Become a MSEIP Scholar
• Qualifications
• Time lines

Financial Opportunities
• Paid Five Week Summer Program
• Financial Support during the School Year
• Paid Field Trips to High-Tech Laboratories

Educational Opportunities
Research Training
Individualized Tutorial Services
Special Scheduling of Courses
Assigned Personal Mentor
Assistance with Registration

Professional Development Opportunities
Enrolment in Professional Organizations
Internships
Job Placement upon Graduation