

S.T.E.P. End of Year Report: 2010-11

The STEP program is designed for the 11th and 12th grade students and instructors of the program to gain valuable knowledge and skills related to engineering and manufacturing technology currently being used at most facilities that have a production process. This program is a collaborative effort between (MSU) CAVS Extension/Bagley College of Engineering, Nissan, Mississippi Department of Education (MDE) Office of Vocational Education, and Madison County, Leake County, Canton Public, and Jackson Public school districts. The program is designed to introduce the students and instructors to the latest technology, with emphasis on Robotics, Wireless Communications and Programmable Logic Controllers, being used at a major manufacturing facility. The students complete a minimum 54 – 75 contact hours throughout the school year and complete a final project/competition to demonstrate their comprehension and application of this technology. They compete for scholarships with a program trophy. Each student is asked to track their activities with a journal that describes the skills being taught as well as their writing and comprehension skills. The relationships that have been developed with the school districts, MDE, MSU, and Nissan has given these student recognition as potential leaders in the next technology savvy generation. This request for funding will include the following components:

- Instructor Training (40 hrs)
- Student Training (54 – 75 hrs)
- Pre-Admission College Registration
- Manufacturing Tour
- Robotics & Computer Simulation Competition
- Awards and graduation ceremony

This has been a successful year for the STEP Program. The picture below represents the invitation logo that will be used to move the program forward. Special thanks to the graphic artist at MSU Bagley and MDE Research Curriculum Unit for their creative ability.



Student Technology Exchange Program Mission:

This project is centered on identifying potential engineering students who have the capacity and interest in professional careers related to these disciplines: Mechanical, Industrial, Civil, and Manufacturing. Through the association with the Vocational Centers involved with this program the background components will be reinforced with the Engineering/Robotics program that feed the 11th and 12th grade students into the STEP program. These students will be actively engaged in concepts and methodologies related to the Science, Technology, Engineering and Mathematics (STEM) principles. The STEP program will allow these future engineers or other professional career leaders to begin the process of the Co-Op type learning model for their future aspirations. This hands on training gives these students a head start on the type of equipment, modeling designs, teamwork, competition and other character and skill developing techniques that will be used throughout their professional careers.

S.T.E.P. Supporters:

- Nissan
- Entergy
- Mississippi Manufacturer Association
- Canton Public School District
- Madison County School District
- Jackson Public School District
- Leake County School District
- BankPlus
- MINAC
- BankFirst
- Siemens
- Crown Trophy
- Tower Automotive
- Ms Dept of Education
- Research Curriculum Unit
- MSU Bagley College of Engineering
- JSU College of Engineering
- Nissan Store

Grant Recipients:

- Jackson Career Development Center
- Leake County Vo-Tech Center
- Canton Career Center
- Madison County Business & Commerce Center

The Scholarship recipients are:

MMA/STEP Outstanding Program Students 2010-11:

- Adam Young – Jackson - \$1,000
- Jalen Rhodes – Jackson - \$1,000

MMA/STEP Outstanding Program Student:

- Anthony Pfau – Madison - \$500
- Brandon Sellers – Leake - \$500

Nissan/STEP Outstanding Student:

- Trevor Williams - Canton - \$500

Nissan/STEP Outstanding Student:

- Khadijah Adams - Canton - \$500

STEP Plans for 2011-12:

- Instructor Summer Training – Summer 2011
- Robotics Certification for Instructors – Summer 2011
- Give Counselors S.T.E.P. Video or Cable TV 17 or 18 – Aug 2011
- New Equipment Acquisition: Robotic Simulator, Flash Cards, Printer
- Pre-College Registration Day – September 2011
- Manufacturing Tour Day – October 2011
- Computer/Robotics Competition Trials – April 2012
- Award Ceremony – April 2012

Demographics Totals from 2005-11:

The minority participation since the program began:

- 2005-06: 73%
- 2006-07: 58%
- 2007-08: 78%
- 2008-09: 87%
- 2009-10: 84%
- 2010-11: 83%

<u>2005-06</u>	<u>2006-07</u>
Males: 16	Males: 14
Females: 7	Females: 15
Blacks: 17	Blacks: 17
Whites: 6	Whites: 7
Others: 0	Others: 5
Total Students: 23	Total Students: 29

<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>
Males: 22	Males: 26	Males: 30	Males: 19	Males:
Females: 15	Females: 12	Females: 13	Females: 16	Females:
Blacks: 29	Blacks: 33	Blacks: 36	Blacks: 29	Blacks:
Whites: 5	Whites: 2	Whites: 6	Whites: 6	Whites:
Others: 3	Others: 3	Others: 1	Others: 2	Others:
Total Students: 37	Total Students: 38	Total Students: 43	Total Students: 35	Total Students: