



## MADISON CENTRAL HIGH SCHOOL ACADEMY OF ENGINEERING

### Mission/Goal:

Prepare students that are interested in pursuing any engineering or other STEM-related career for the rigorous curriculum at a 2-year or 4-year college and provide authentic workforce training.

Benchmark – 2016 graduates – 88% 4-year college enrollment, 12% 2-year college enrollment  
2017 graduates – 100% 4-year college enrollment

### Objectives for Engineering Academy for next year:

- **Maintain and increase female and non-traditional enrollment above the national average, which is approximately 17% for females and 12.5% for minorities other than Asian.**

Year	Total Enrollment	Female Enrollment	% Female	Minority Enrollment other than Asian	% Minority
2013-2014	22	3	13.6%	2	9.1%
2014-2015	82	17	20.7%	10	12.0%
2015-2016	92	20	21.7%	10	10.9%
2016-2017	98	31	31.6%	11	11.2%

- **Increase end of course test scores in all PLTW courses to be above the national average of a 5.**

Year	IED	POE	DE	AP CSP	EDD
2013-2014	N/A	N/A	N/A	N/A	-
2014-2015	6.60	4.54	N/A	N/A	-
2015-2016	5.59	6.19	3.75	N/A	-
2016-2017	6.05	4.32	3.29	7.89	No EOC

- **Insure that 100% of graduating engineering academy students have received at least one industry certification.**

Year	9 <sup>th</sup> graders	10 <sup>th</sup> graders	11 <sup>th</sup> graders	12 <sup>th</sup> graders	Total % of all enrolled academy students
2016-2017	27%	100%	33.3%	100%	54%

- **Develop exposure to real world engineering practices by bringing in at least 1 guest speaker and providing at least 1 field trip tour for observation in the community per year.**
  - 2013-2014
    - Guest Speakers – UAH recruitment
    - Field Trips – BEST Robotics at MSU, MSU Engineering Day
  - 2014-2015
    - Guest Speakers – Occupational Therapy Student from UMC
    - Field Trips – BEST Robotics at MSU, MSU Engineering Day
  - 2015-2016
    - Guest Speakers – Ole Miss Recruitment
    - Field Trips – Neel Schaffer
  - 2016-2017
    - Guest Speakers - Yates construction, Neel Schaffer, Geological Engineering recruiter from Ole Miss; Occupational Therapy Students from UMC
    - Field Trips – Neel Schaffer; Bomgar Corporation; MSU Engineering Day, Ole Miss CME tour and CLEP Testing, Nissan Training Center
  - 2017-2018 - Planned so far
    - Guest Speakers – Catherine Anderson – Electrical Engineering Consultant
    - Field Trips – Neel Schaffer Amphitheatre construction, Nissan Hydraulics and Pneumatics Intro, Ole Miss CME Tour and CLEP Testing, MSU Engineering Day,
- **The students will achieve science and math literacy by earning at least a C in all science and math classes.**

Year	Math Class with C or higher	% of 11 <sup>th</sup> and 12 <sup>th</sup> taking AP or Dual Enrollment Math/with C or higher	Science Class with C or higher	% of 10 <sup>th</sup> , 11 <sup>th</sup> , and 12 <sup>th</sup> taking AP Science/with C or higher	
2016-2017	99.8%		98.8%		All grades