



January 27, 2010

To: Board of Education
From: Daniel Nerad
RE: Education for Employment Five-Year Plan

Background

The Education for Employment (E4E) Plan is a local tool to plan for the development, collaboration, resource sharing, and broad community support for current, new, or improved learning opportunities for students in grades PK to 12. The plan shall be consistent with any other district plans, shall be defined in incremental steps and shall be modified by September 1, 2004. The plan shall be reviewed annually by the council specified under s. PI 26.05 and revised, if necessary, at least once every 5 years by the board. The last Board approved plan was in August 2004.

This plan affirms the commitment to and the actions of school communities to: prepare elementary and secondary students for future employment; ensure technological literacy; promote lifelong learning; encourage good citizenship; advance collaboration among business, industry, labor, post-secondary schools, and school districts; establish a role for public schools in the workforce and economic development of Wisconsin.

Plan Overview

The Madison Metropolitan School District Education for Employment plan has nine major objectives, including:

1. Ensure all MMSD students benefit from a comprehensive education that includes Career & Technical Education and career development. (Career & Technical Education includes: Business Education and Information Technology, Marketing Education, Family & Consumer Science, Health Science Occupations, Technology Education and Agriculture Education).
2. Increase opportunities for students and curriculum rigor and relevance by integrating academic, workplace and Career & Technical Education content.
3. Implement common course assessments, the ACT Career Readiness Assessments, WorkKeys curriculum, and a financial literacy assessment.
4. Provide students with different delivery models based on real-world experiences beyond the classroom, including work-based learning.
5. Provide continuous professional development to staff in effective teaching, leadership, and contemporary industry-based skills.
6. Develop a 3- to 5-year long-range plan for equipment and technology resources and allocations.
7. Evaluate the Career & Technical Education program.
8. Increase awareness of Career & Technical Education and partnerships with MMSD staff and business and community members.
9. Increase Career & Technical Education leadership and staff support to implement the Education for Employment plan and administer enhanced Career & Technical Education that provides equitable, comprehensive, relevant, standards-based CTE opportunities for all MMSD students.

EDUCATION FOR EMPLOYMENT PLAN

September 1, 2009 – August 31, 2014

**MADISON
METROPOLITAN
SCHOOL DISTRICT**

Education for Employment Plan Madison Metropolitan School District

Introduction to the Plan

An introduction to the plan frames the process used to review, develop and revise the E4E plan with the goal of assisting all stakeholders in an understanding of the plan. The development team, key stakeholders, resources, and evaluative instruments or procedures utilized may be included.

The Madison Metropolitan School District Education for Employment Plan was coordinated by the Coordinator of Career & Technical Education and developed with input from teachers, school counselors, parents, advisory committee members, business representatives, and students. The Career & Technical Education Department is responsible for implementing the plan in collaboration with local schools, senior district managers, and staff. The plan is a local tool to advance the development, collaboration, resource sharing, and broad community support for current, new, and improved learning opportunities for Madison students in grades PK to 12. The plan affirms the commitment to and the actions of school communities to prepare elementary and secondary students for future employment, ensure technological literacy, promote lifelong learning, encourage good citizenship, advance collaboration among business, industry labor, post-secondary schools, and the school district, and establish a role for Madison schools in the workforce and economic development in the city, state, nation, and world.

The following objectives are represented in the Education for Employment plan:

Objective 1: Ensure all MMSD students benefit from a comprehensive education that includes Career & Technical Education and career development. (Career & Technical Education includes: Business Education and Information Technology, Marketing Education, Family & Consumer Science, Health Science Occupations, Technology Education and Agriculture Education).

Objective 2: Increase opportunities for students and curriculum rigor and relevance by integrating academic, workplace and Career & Technical Education content.

Objective 3: Implement common course assessments, the ACT Career Readiness Assessments, WorkKeys curriculum, and a financial literacy assessment.

Objective 4: Provide students with different delivery models based on real-world experiences beyond the classroom, including work-based learning.

Objective 5: Provide continuous professional development to staff in effective teaching, leadership, and contemporary industry-based skills.

Objective 6: Develop a 3- to 5-year long-range plan for equipment and technology resources and allocations.

Objective 7: Evaluate the Career & Technical Education program.

Objective 8: Increase awareness of Career & Technical Education and partnerships with MMSD staff and business and community members.

Objective 9: Increase Career & Technical Education leadership and staff support to implement the Education for Employment plan and administer enhanced Career & Technical Education that provides equitable, comprehensive, relevant, standards-based CTE opportunities for all MMSD students.

Education for Employment Plan Madison Metropolitan School District

A. Education for Employment Coordinator

PI 26.04 (2) The board shall designate a staff person certified under s. PI 34.32 (7) (a), to coordinate and direct the education for employment program.

Gabrielle Banick, Coordinator of Career & Technical Education and Local Vocational Education Coordinator (LVEC), will lead and coordinate the district Education for Employment program. The coordination will be assisted by Lisa Wachtel, Executive Director of Teaching & Learning, Phil Hubble, Program Support Counselor, Kolleen Onsrud, High School Planner, and Department Chairpersons in Career & Technical Education, Computer Science, Guidance and other academic areas as necessary.

The role of the Education for Employment Coordinator is as follows.

- understand and promote the concepts of a comprehensive Education for Employment program in all educational endeavors.
- develop the district K-12 Education for Employment plan, review and update annually.
- analyze data collection with district staff support to identify Education for Employment goals.
- plan, implement and maintain programs and activities that will meet the district's K-12 Education for Employment objectives.
- implement a data collection system for Education for Employment planning that ensures the K-12 curriculum, instructional techniques, and experiences are based on economic and student realities for the future.
- evaluate the collected data to determine economic trends, employment needs, and current school programming.
- disseminate data related to education for employment including local, state and national labor market information.
- develop school, business and community partnerships that support the goals of Education for Employment.
- assess staff development needs and provide quality staff development opportunities to support Education for Employment initiatives.
- plan, coordinate and evaluate work-based learning as a strategy for career development.

The coordinator is also responsible for career guidance in the district, therefore, works closely with school counselors along with coordinating grades 6-12 Career & Technical Education offerings and providing leadership to integration across departments, schools, and disciplines.

B. Tech Prep Council Representative

PI 26.04 (1) The board shall insure district representation on the technical preparation council as created under s. 118.34 (2), Stats.

Lisa Wachtel, Executive Director of Teaching & Learning, represents MMSD on the Tech Prep Council. Gabrielle Banick serves on the Tech Prep Work Group coordinated by the Madison Area Technical College (MATC). Gabrielle Banick also represents MMSD on the Dane County School Consortium led by Diane Kraus. The MATC Tech Prep Coordinator and other MATC College Connections staff participate and report regularly at the monthly Dane County School Consortium meetings. Tech Prep minutes are distributed to school districts and a Tech Prep report is included in the Dane County School Consortium minutes. Relevant items from the Tech Prep Council, Tech Prep Work Group, and Dane County School-to-Career consortium are distributed to MMSD senior management, department chairs, and others on a regular basis by Lisa Wachtel and Gabrielle Banick.

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C. Community Profile

PI 26.03 (1) An education for employment long range plan shall be developed by the board...The plan shall include all of the following: (a) An analysis of local, regional and state labor market needs and the education and training requirements for occupations which will fill those needs.

Describe the community, the school district, and the structure under which the school district operates. Include in this profile any factors which may be relevant to the district Education for Employment program.

The Madison Metropolitan School District (MMSD) is the second largest district in the state, serving approximately 24,295 students in 47 schools, including 31 elementary schools, 11 middle schools, four comprehensive schools, and one alternative high school. The district's enrollment data reveal a rapidly increasing level of diversity. Since 1997 the percentage of minority students has increased from 30% to 50%. The student population is 50% White, 24% African-American, 15% Hispanic, 10% Asian, and 1% Native American. Over 47% of students qualify for free/reduced lunch, up from 26% in 1997. Nearly 15% (total number 3732) of students receive special education services while 16% (total number 3832) are English Language Learners.

The following demographic information is drawn from the most recent U.S. Census Bureau data:

| | Dane County 2000 | Madison 2000 | Dane County 2005-07 | Madison 2005-07 |
|---|------------------|---------------|---------------------|-----------------|
| Total Population | 426,526 | 208,054 | 469,709 | 219,843 |
| Male | 211,020 | 102,248 | 234,094 | 107,889 |
| Female | 215,506 | 105,806 | 235,615 | 111,954 |
| White | 379,447 (89%) | 174,689 (75%) | 409,159 (87.1%) | 180,012 (81.9%) |
| African American | 17,069 (4.0%) | 12,155 (5.8%) | 20,457 (4.4%) | 14,199 (6.5%) |
| American Indian | 1,404 (0.3%) | 759 (0.4%) | 1,268 (0.3%) | 917 (0.4%) |
| Asian | 14,735 (3.5%) | 12,065 (5.8%) | 20,547 (4.4%) | 14,646 (6.7%) |
| Native Hawaiian and Other Pacific Islander | 133 (0%) | 77 (0%) | 0 (0.1%) | 0 (0.1%) |
| Hispanic or Latino | 14,387 (3.4%) | 8,512 (4.1%) | 21,743 (4.6%) | 12,477 (5.7%) |
| Some other race | 6,118 (1.4%) | 3,474 (1.7%) | 9,034 (1.9%) | 4,745 (2.2%) |

County Labor Market: According to the Demographic Services Center at the Wisconsin Department of Administration, Dane County grew from 438,881 residents in 2002 to 482,705 in 2008. The County is projected to gain 227,000 residents (53 percent), the largest numeric increase among all Wisconsin counties, during the 35-year period from 2000 - 2035. Dane County is expected to exceed 500,000 residents around 2012 and pass 600,000 residents about 15 years later in 2027. Other County information includes:

- Over the course of 2002, an average of 280,305 Dane County residents participated in the labor force; unemployment rates are typically low by state and national standards.
- In 2001, Dane County's per capita personal income of \$36,201 was well above other counties.
- The region's skilled, flexible workforce is continually replenished and strengthened by educational and training institutions. The 18- to 24-year-old workforce has a higher than average baccalaureate degree attainment rate (10.7% regionally, 7.4% statewide, and 7.8% nationally) and an associate's degree and partial college degree attainment rate substantially higher than the national rate (47.1% regionally, 38.5% nationally). The 25-and-older workforce boasts rates of high school graduation and associate, baccalaureate, and graduate degrees all higher than the national average. (*Thrive 2008*)

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Top Employers: Dane County

<http://worknet.wisconsin.gov/worknet/default.aspx>

| | |
|----|---|
| 1 | UW-MADISON |
| 2 | MADISON METROPOLITAN SCHOOL DISTRICT |
| 3 | AMERICAN FAMILY MUTUAL INSURANCE CO |
| 4 | UW HOSPITALS & CLINICS AUTHORITY |
| 5 | DEPARTMENT OF CORRECTIONS |
| 6 | EPIC SYSTEMS CORP |
| 7 | DEPARTMENT OF HEALTH SERVICES |
| 8 | UW MEDICAL FOUNDATION |
| 9 | CITY OF MADISON |
| 10 | SSM HEALTH CARE OF WISCONSIN INC |
| 11 | UNIVERSITY OF WISCONSIN HOSPITALS & CLINICS |
| 12 | WPS |
| 13 | MERITER HOSPITAL INC. |
| 14 | DEAN MEDICAL CENTER |
| 15 | COUNTY OF DANE |
| 16 | MADISON AREA TECHNICAL COLLEGE |
| 17 | VETERANS ADMINISTRATION HOSPITAL |
| 18 | CUNA MUTUAL INSURANCE SOCIETY |
| 19 | WALGREENS |
| 20 | COVANCE LABORATORIES INC. |
| 21 | KRAFT FOOD NORTH AMERICA |
| 22 | DEPARTMENT OF TRANSPORTATION |
| 23 | ULTRA MART FOODS LLC |
| 24 | US POSTAL SERVICE |
| 25 | UW-EXTENSION |

The top five industry groups in Dane County (1st Quarter 2009)

- Education Services
- Food Services & Drinking Places
- Professional & Technical Services
- Hospitals
- Insurance Carriers & Related Activities

Top Paying Hourly Occupations (2007)

- Orthodontists \$93.01
- Dentists, General \$87.24
- Psychiatrists \$83.13
- Family & General Practitioners \$74.99

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Additionally, the South Central Wisconsin Workforce Development Area Industry Employment Projections for 2006 – 2016 are as follows:

| Industry Title | Estimated Employment | | | |
|--|----------------------|---------|--------|----------|
| | 2006 | 2016 | Change | % Change |
| Total, All Nonfarm Industries | 453,910 | 493,630 | 39,720 | 8.8% |
| Construction/Mining/Natural Resources | 22,840 | 25,080 | 2,240 | 9.8% |
| Manufacturing | 60,520 | 60,750 | 230 | 0.4% |
| Printing and Related Support Activities | 6,090 | 6,040 | -50 | -0.8% |
| Fabricated Metal Product Manufacturing | 7,520 | 7,510 | -10 | -0.1% |
| Machinery Manufacturing | 6,710 | 6,370 | -340 | -5.1% |
| Trade | 63,820 | 65,240 | 1,420 | 2.2% |
| Food and Beverage Stores | 8,160 | 8,030 | -130 | -1.6% |
| Transportation and Utilities (Including US Postal) | 13,250 | 14,470 | 1,220 | 9.2% |
| Financial Activities | 30,560 | 33,860 | 3,300 | 10.8% |
| Education and Health Services (Including State and Local Government) | 87,870 | 101,050 | 13,180 | 15.0% |
| Educational Services | 39,440 | 41,120 | 1,680 | 4.3% |
| Hospitals | 16,380 | 19,410 | 3,030 | 18.5% |
| Leisure and Hospitality | 42,220 | 47,030 | 4,810 | 11.4% |
| Information/Prof. Services/Other Services(2) | 94,110 | 106,810 | 12,700 | 13.5% |
| Government (Excluding US Postal, State and Local Education and Hospitals)(3) | 38,740 | 39,340 | 600 | 1.5% |

According to the Workforce Development Board (accessed online at http://worknet.wisconsin.gov/worknet/joblist_highgrow.aspx?menuselection=js), the 25 fastest growing occupations in Wisconsin during the 2006-2016 time period, with projected percentages of growth included in parentheses, are as follows: network systems and data communications analysts (43.5%); home health aides (40.8%); personal and home care aides (38.6%); computer software engineers, applications (37.8%); medical assistants (36.5%); physician assistants (33.3%); radiation therapists (32.7%); personal financial advisors (32.2%); dental hygienists (31.2%); skin care specialists (29.4%); dental assistants (30.3%); substance abuse and behavioral disorder counselors (30.3%); physical therapy assistants (29.9%); surgical technologists (29.4%); cardiovascular technologists and technicians (28.6%); physical therapist aides (29%); veterinary technologists and technicians (27.8%); social and human services assistants (28.1%); pharmacy technicians (27.5%); respiratory therapists (26.8%); computer software engineers, systems software (26.8%); financial analysts (26.6%); registered nurses (26.2%); physical therapists (25.1%); marriage and family therapists (25%).

The most current County snapshot can be found at the following location:
http://dwd.wisconsin.gov/dwd/publications/dws/lmi/pdf/deti_14928_DAN_e_p.pdf

Wisconsin's Labor Market: Employment in Wisconsin is projected to grow between 2006 and 2016 but at a slower pace than in the past. Labor force growth is expected to slow, as the state's baby boomers reach retirement age. There will be an estimated 246,400 new jobs created between 2006 and 2016. In addition

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to the new jobs, there will be numerous jobs available due to replacement openings. The greatest source of job openings will be from employers needing to replace workers who permanently leave an occupation due to retirement, illness, or change in career. Over 680,200 jobs will be open due to replacement needs of employers during the ten-year projection period. Together, the total 926,600 job openings will be dispersed among 800 occupations in nearly 90 industries. Changing demand, technology advancements, and global competition will continue to drive the long-term historic shift to the need for more skilled workers in the state. (2008, *Department of Workforce Development*)

The labor force participation peaks around ages 35-54. In past decades, employers relied on dramatic increases in females to replace workers leaving the labor force. Today, female participation rates are much less likely to increase as most females are in the workforce. Together, these trends prompt employers to ask where they will find replacement workers when baby boomers start leaving the labor force in large numbers.

The Madison Region had about 11 percent of its jobs in manufacturing as the recession began. Nearly 56 percent of the Madison region's job loss since the beginning of the recession was in the manufacturing sector, leaving the region with 52,200 manufacturing jobs currently -- about 10 percent of the region's total jobs. The region's manufacturing sector has been very hard hit during this recession.

Almost without exception, recessions accelerate changes that were already occurring in the economy. In the case of manufacturing, there might be, even likely will be, some recovery from the lows that were reached in the depths of the recession, but it is very unlikely that recovery will see the same levels of employment in manufacturing that were present before the recession began. Many of those jobs have been displaced, gone to cheaper producers elsewhere, or displaced by more productive methods.

The most important information to glean from this information is that new job growth or recovery job growth will not be in manufacturing industries. Economic and workforce development professionals, and workforce training institutions will be called upon to prepare the workforce for a different array of skills than they have in the past. Over the next 10 years, transportation, financial activities, health care services, information and professional services are the industries that will likely see strong growth in the Madison region. Preparing for these changes is not a step back, but a step forward to the future. (*Thrive 2009*)

For current information on Wisconsin Jobs and Economy go to: <http://worknet.wisconsin.gov/worknet/>
Wisconsin Jobs, 2016, DWD, Office of Economic Advisors

| Top Ten Occupations most "in demand" in Wisconsin (annual job openings) | Education & Training Typically Required | Average Annual Wage |
|--|--|----------------------------|
| Registered Nurses | Bachelor's degree | \$57,376 |
| Truck Drivers, Heavy & Tractor-Trailer | Moderate-term on-the-job training | \$38,070 |
| Executive Secretaries & Administrative Assistants | Work experience in a related occupation | \$35,322 |
| Accountants & Auditors | Bachelor's degree | \$58,374 |
| Carpenters | Long-term on-the-job training | \$38,760 |
| Computer Systems Analysts | Bachelor's degree | \$62,862 |
| Computer Software Engineers, Applications | Bachelor's degree | \$69,811 |
| Licensed Practical & Licensed Vocational Nurses | Postsecondary vocational training | \$37,618 |
| Clergy | Master's degree | \$44,110 |
| Insurance Sales Agents | Bachelor's degree | \$65,542 |

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Top Employers: Wisconsin

<http://worknet.wisconsin.gov/worknet/default.aspx>

| | |
|----|--------------------------------------|
| 1 | WAL-MART ASSOCIATES INC |
| 2 | UW-MADISON |
| 3 | US POSTAL SERVICE |
| 4 | MILWAUKEE PUBLIC SCHOOL |
| 5 | DEPARTMENT OF CORRECTIONS |
| 6 | MENARDS |
| 7 | KOHL'S DEPARTMENT STORES INC. |
| 8 | ULTRA MART FOODS LLC |
| 9 | CITY OF MILWAUKEE |
| 10 | MARSHFIELD CLINIC |
| 11 | AURORA HEALTH CARE METRO, INC |
| 12 | GUNDERSEN LUTHERAN ADMINISTRATIVE |
| 13 | KOHLER CO |
| 14 | AURORA MEDICAL GROUP INC. |
| 15 | TARGET |
| 16 | DEPARTMENT OF HEALTH SERVICES |
| 17 | WALGREEN CO. |
| 18 | QUAD/GRAPHICS INC |
| 19 | SHOPKO |
| 20 | COUNTY OF MILWAUKEE |
| 21 | PRIME CARE HEALTH PLAN |
| 22 | KWIK TRIP INC |
| 23 | AURORA HEALTH CARE INC. |
| 24 | MADISON METROPOLITAN SCHOOL DISTRICT |
| 25 | M & I BANK |

School District Description and Structure. The Madison Metropolitan School District is governed by an 8-member Board of Education. A new superintendent, Dr. Daniel Nerad, was hired in 2008. Two significant initiatives significantly shaped the Education for Employment plan at the high school level, including the \$5.5 million Smaller Learning Communities Grant to redesign high schools received in 2008 and the Superintendent's Strategic Plan approved by the Board of Education in 2009. These initiatives are summarized below.

Smaller Learning Communities Grant goals and measures include:

- **Goal 1:** Increase Student Achievement for All Students
Long Term Measure: 100% completion rate for MMSD high school students.

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- **Goal 2:** Increase student to student and student to adult relationships.
Long Term Measure: 100% student participation and success in the academic core in 9th and 10th grades
- **Goal 3:** Increase Post-Secondary Options
Long Term Measure: 100% of the high school students will have an individual education plan with defined post secondary options

The district action plan was finalized in December 2009 to accomplish these goals with the following priorities: (1) define essential understandings aligned to ACT Career and College Readiness Standards (2) increase literacy skills for all students (3) continue leadership development for Department Chairs to become instructional leaders (4) implement professional collaboration time and (5) establish small learning communities. The Coordinator of Career & Technical Education is a member and provided input to the district action plan and goal setting.

The Madison Metropolitan School District Strategic Plan was developed by a 60-member team of community and staff members. A new mission statement for the district is as follows:

Our mission is to cultivate the potential in every student to thrive as a global citizen by inspiring a love of learning and civic engagement, by challenging and supporting every student to achieve academic excellence, and by embracing the full richness and diversity of our community.

Belief statements, parameters, and the strategic objectives for students, curriculum, staff, resource/capacity, and organization/systems were also developed. The Education for Employment plan included in Appendix A is directly linked and built from the Strategic Plan's strategies, objectives, performance measures, and action steps to assure consistency and implement district priorities.

D. Collaboration and Partnerships

PI 26.04 (3) The board shall encourage the development of business and education partnerships. (4) The board may coordinate the education for employment program with other public school districts; CESAs; technical college districts; colleges and universities; and work force development programs.

List the names of and purposes of the school/business/community partnerships in which the district is currently engaged, and describe the associated goals and activities of each.

District staff members are involved in a number of community and education partnerships. The Madison Metropolitan School District understands the importance of collaboration with the community groups, and local business and industry partners in education -- all of which are critical to developing our future workforce. Examples of partnership activities within the district include:

- providing work experiences and/or job shadowing
- sharing resources
- donations of equipment or resources to the classroom
- sharing facilities
- guest speakers in the classroom
- tours of local businesses
- advisory team participation
- community service through time and talent contributions

Other partnerships supported by the district include:

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Global Academy

The Global Academy is a partnership of eight school districts in Dane County. The goals include creating course offerings and program of studies for specialized and advance training; partnering with business, academic and manufacturing sectors to supply expertise and specific content areas, materials, staff development, staffing, apprenticeship and career placement. The Global Academy will enroll students and begin classes in Biomedical Engineering in 2010-11. Gabrielle Banick serves on the Curriculum Planning Committee and the Advisory Committee for the Global Academy. Assistant Superintendent, Pam Nash, represents the district on the Superintendents' group. Teachers Michael Brown, Betsy Barnard, and Ben Senson serve on specific curriculum advisory committees.

The Dane County Schools Consortium

The Dane County Schools Consortium (DCSC) is managed by Dane County Superintendents. Under the umbrella of the DCSC office, the Dane County School to Work Office provides services to the 16 area Dane County school districts. The DCSC coordinates a number of projects for the districts including supervised work-based learning activities, classroom instruction, professional development and connection with business and industry. Gabrielle Banick attends Dane County School Consortium meetings.

The Youth Apprenticeship Program

The Dane County Youth Apprenticeship Program is coordinated through the Dane County School Consortium Office. All schools participate in business advisory committees within each program area related to that Youth Apprenticeship Program. These advisory committees generally meet once a year or more and provide direction to the Dane County Office regarding Youth Apprenticeship Curriculum. Gabrielle Banick coordinates the Youth Apprenticeship program for MMSD.

MATC Tech Prep Council and Work Group

Madison Metropolitan School District participates on the MATC Tech Prep Council (Lisa Wachtel) and Tech Prep Work Group (Gabrielle Banick). A major goal of this partnership is to strengthen relationships with secondary and post-secondary education through alignment of high school career and technical education with post-secondary technical training. The MATC Tech Prep office provides information on articulated, transcripted credit along with teacher training in counseling and career and technical areas.

MMSD faculty and MATC instructors work jointly to conduct the annual Accounting Seminar for 120 MMSD students, implement WoodLINKS curriculum in Construction pathway and the Project Lead The Way curriculum in the Science, Math, Technology, and Engineering Cluster and articulate Year 1 Automotive Youth Apprenticeship curriculum. Under the direction of Susan Worth, Nursing Assistant Program Director, MATC frequently provides Nursing Assistant instruction for MMSD students.

The Workforce Development Board (WDB) of South Central Wisconsin, Inc.

The Workforce Development Board (WDB) of South Central Wisconsin, Inc. is a non-profit organization with a board that is dedicated to developing strong community partnerships to support innovation and excellence in workforce development. The Dane County School to Career Coordinator is in contact with the WDB and shares information with school districts on WDB opportunities. The DCSC office coordinates the Workforce Investment Act which provides opportunities for low income students. In 2009-10, MMSD received \$37, 090 from the WDB in a WIRED grant to increase the number of Certified Nursing Assistants among MMSD students.

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Powered-Up

Powered-Up is a group of information technology businesses whose goal is to increase awareness of career opportunities in information technology to students and educators. The information from the Powered-Up Committee is shared at the DCSC monthly meetings. The group supports placement of youth apprenticeship students in Information Technology and coordinates career fairs, job interviews, and presentations on IT careers, and staff development for educators in Information Technology.

Postsecondary Faculty and Staff

Ongoing effective relationships are established with Madison Area Technical College and Herzing College deans, assistant deans, and faculty with the goal of developing seamless transitions/pathways for students by increasing curriculum articulation. Connections are also made with the University of Wisconsin-Madison, University of Wisconsin-Platteville, University of Wisconsin-Whitewater, Milwaukee School of Engineering, and Moraine Park Technical College toward the goal of increasing the number and quality of articulation agreements between MMSD and technical colleges and universities.

Business & Education Partnership

One of the most productive and essential collaborative partnerships is between the district and the business community through the Business & Education Partnership, Inc. (BEP). The BEP is a 50/50 partnership between the Greater Madison Chamber of Commerce and the MMSD and Edgewood Schools. The LVEC serves in a dual capacity as CTE Coordinator and BEP Curriculum Coordinator. To that end, she is able to integrate the goals of CTE and the BEP, which are to bring together classroom and commerce and introduce students to the free enterprise system. The 25-member BEP Board of Directors and 80 member businesses serve as a readily available and willing source to serve on CTE advisory committees, assist with CTE activities (e.g., Reality Store - "Mad City Money", provide internship sites, validate curricula, including Financial Literacy, Marketing, etc.), embrace the career cluster model by expanding membership to represent more of the clusters, and advocate for the rapidly changing diverse student population in Madison schools. The BEP also sponsors career awareness activities, including the School Makes A Difference program for 8th graders and the 10th grade business visits program.

Career & Technical Education Advisory Committees

Partnerships are established with business, industry, postsecondary education staff, and community members within each of the Career & Technical Education advisory committees. Current advisory committees are established in the following areas: Accounting, Building Science, WoodLINKS, Health Sciences, Project Lead The Way, HERO/HOSA, and Marketing. Future advisory committee areas include: Automotive, Agriculture Education, and ProStart/Culinary Arts.

Project Lead The Way Community Partnership Team

Progress made in PLTW implementation and the relationships with the business community and 2- and 4-year colleges informed the decision to develop the Engineering & Technology-Science and Math pathway. In December 2006, the PLTW Community Partnership Team (CPT) was established and chaired by James Riordan, President and CEO, Wisconsin Physicians Service. The LVEC serves as coordinator and staff to the CPT along with CTE Instructional Resource teachers. All four MMSD high schools are now PLTW certified. The CPT raised \$97,000 to support PLTW with another \$40,000 pledged for 2008-09. The LVEC is responsible for allocating and budgeting district resources and teachers/program expertise with the CPT's directive to establish a positive and sustainable PLTW program for the next 5-10 years. Future directions include expanding the middle school "Gateway to Technology" program, conducting follow-up studies on graduates, and developing public relations materials for students and parents. A PLTW work-based learning option was added so that students could earn the DPI Employability Skills certificate.

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E. Career & Technical Education Programs

PI 26.03 (1) An education for employment long range plan shall be developed by the board ... The plan shall include all of the following: (b) A description of vocational education/career and technical education provided in the district ... PI 26.03 (3)(c)(3) Instruction which provides for the practical application of academic skills and applied technologies ...

Discuss the integration and practical application of academic skills, applied technologies, and work-based learning opportunities in Career and Technical Education programs throughout the district.

The Madison Metropolitan School District currently offers Career and Technical Education in five of the six areas specified in the Carl D. Perkins Vocational and Technical Education Act, including:

- Business Education
- Marketing Education
- Family & Consumer Education
- Health Science Occupations Education and
- Technology Education

The federal legislation required school districts to identify the specific career clusters and pathways that would be implemented from 2007-2012 in order to receive federal and state funds. Through the Department of Career & Technical Education, MMSD identified 11 pathways in 10 clusters in which to begin implementation. While there are two to eight pathways within each career cluster in the national framework, it is unlikely that school districts will implement more than one or two pathways under each cluster because of limited resources and capacity. For this reason, MMSD's clusters and pathways are similar, meaning that each pathway *Program of Study* (defined below) typically represents all the district offerings in a particular cluster. MMSD's career clusters (bolded) and pathways include:

| MMSD Career Clusters | MMSD Pathways within Clusters |
|---|--|
| Agriculture, Food & Natural Resources | Agribusiness Systems |
| Architecture & Construction | Construction |
| Business, Management & Administration | Business Information Management |
| Health Science | Therapeutic Services |
| Human Services | Early Childhood Development & Services and Family & Community Services |
| Information Technology | Information Support and Services |
| Law, Public Safety, Corrections and Security | Security & Protective Services (added 2009-10) |
| *Marketing, Sales & Service | Management and Entrepreneurship |
| *Science, Technology, Engineering & Mathematics | Engineering and Technology - Science & Math |
| Transportation, Distribution & Logistics | Facility and Mobile Equipment Maintenance |

The Carl D. Perkins Vocational and Technical Education Act defines a *Program of Study* as a "State approved programs which may be adopted by local education agencies and postsecondary institutions to be offered as an option to students when planning for and completing future coursework, for career and technical content areas" (<http://www.dpi.state.wi.us/cte/careerclustershome.html>). *Programs of Study* require general foundations, school counseling and career development, rigorous curriculum and quality instruction, transition planning and policy, and accountability and continuous improvement. Typically, *Programs of Study* are developed and implemented within two to five years. MMSD has two *Programs of Study* as indicated by the asterisk (*) in the list above.

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Foundational to developing a *Program of Study* is identification of the course offerings within each of the Career & Technical Education areas. This process coincides with the MMSD Department of Teaching & Learning goal to map courses in each major subject area. Career and Technical Education course maps were completed in November 2009 and are included in Appendix B along with the corresponding Career & Technical Student Organization corresponding to each cluster. The maps will be used in the district to increase curriculum consistency, identify gaps in curricula across the district, and show the alignment of secondary to postsecondary curricula and preparation. Descriptions of the Career and Technical Education courses on the course maps are included in Appendix C.

The MMSD Career & Technical Education program encompasses four high schools and six middle schools. For the 2009-10, the numbers of certified staff in each of the Department of Public Instruction's instructional areas as designated by the Carl D. Perkins Vocational and Technical Education Act include:

- Business Education - 8
- Marketing Education - 5
- Family & Consumer Education - 18
- Health Science Occupations - 4
- Technology Education - 13

The sixth instructional area, Agriculture Education, was last offered in 2007-08. Due to low enrollments, teacher retirement, the changing Agriculture labor market, development of the district's strategic plan, and implementation of the Smaller Learning Communities grant to redesign high schools, the Agriculture Education program has not yet been reinstated. Pilot initiatives, such as the Culinary Arts/Sustainable Agriculture/Science partnership with Goodman Community Center, inception of an environmental education charter middle school with an agriculture focus, and the Global Academy's potential inclusion of biotechnology, will inform future programming. The Production Agriculture Youth Apprenticeship is available to 11th and 12th grade MMSD students.

Incorporation of the standards into Career & Technical Education curricula is expected. All assessments and learning activities are aligned to the State standards as well as all processes (e.g., textbook selection criteria include the extent to which a book addresses the standards). National curriculum standards are also used in several curricular areas, especially where State Standards are not available (e.g., Business Law, Woods/Construction, etc.). Employability skills as prescribed through the Department of Public Instructions Employability Skills Certificate are taught in all Career & Technical Education classes.

There are two mechanisms for integrating academic content standards into Career & Technical Education courses. Career & Technical Education curricula is developed using the Worldwide Instructional Design System (WIDS) and the Eclipse curriculum warehousing software. Both systems document competencies/skills and electronically link them with state and national academic and technical standards. Examples of integrated Career & Technical Education and academic curriculum integration include:

- Business Education, Family & Consumer Education and Language Arts are integrated into the district's Medical Office Assistant course.
- Business Applications, Economics, and Foreign Language standards are integrated into International Business.
- Personal Financial Literacy Standards are integrated into Business Education and Family & Consumer Education courses.
- Health Science and Science standards are integrated in Certified Nursing Assistant.
- Project Lead The Way, Principles of Engineering (POE) course integrates math standards in Algebra

Work-based learning opportunities in Career & Technical Education programs throughout the district are discussed in the next section.

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F. Work-based Learning

PI 26.03 (3) The program shall provide to all pupils in grades kindergarten through 12 access to an education for employment program which provides for foundations in good citizenship and which links academic and occupational standards to workplace skills and experiences... (a) Career awareness at the elementary grade levels. (b) Career exploration at the middle grade levels. Career exploration shall address stereotyping and may include work based learning experiences and career research identifying personal preferences in relation to future work roles. (c) Career planning and preparation at the high school levels...

Describe the work-based learning experiences available to students at every grade level, including specialized programming, how it is coordinated, and participation levels.

Work-based learning experiences encompassing all aspects of an industry are incorporated into Career & Technical Education program areas and serve as capstone curricular experiences connecting education and business. Strategies to ensure students are provided with the breadth of experiences include: (1) planning learning activities with employers based on students' career focus and (2) mapping course content within schools and across the district to examine course sequence, pre-requisites, and alignment with postsecondary education. MMSD offers the range of work-based learning options described in the following section.

Service Learning Programs

Although Service Learning programs are new to the district, an agreement was signed in September 2009 for the first "Youth Health Services Corps (YHSC)" service learning program. This partnership between East High School and the South Central Area Health Education Center provides for Health Science Occupations students to volunteer for at least 50 hours in a health care setting focusing on childhood obesity prevention, oral hygiene, or health and social issues of the aging. Training that accompanies volunteer hours develops students' leadership and service learning capacities, ability to serve vulnerable populations with cultural and ethical competence, and technical skills in healthcare including CPR and AED training. This program is coordinated by East High School Family & Consumer Education Teacher, Dorothy Winger and is available to students in grades 9-12.

Job Shadowing

An exemplar of job shadowing was developed by West High School Counseling Department. A form of an individualized learning plan was developed in 2005 that provided counselors and teachers opportunities to develop job shadowing experiences based on students' interest inventories. This guidance and learning tool served as the model for the district's new Individualized Learning Plan to be piloted in 2009-10 and made available to all high school students in 2010-11.

Another form of job shadowing is conducted annually with the 10th grade class at East High School. The Business & Education Partnership sponsors the "10th Grade Business Visits" in which groups of students spend two hours at one of 25 businesses in Madison. Students learn first-hand the academic, technical, and employability skills required by a variety of jobs at the business. This program is overseen by the Coordinator of Career & Technical Education and coordinated by the East High School Counseling team.

Internships and the Employability Skills Certificate Programs

Cooperative Education Skill Standards Certificate Program, including the Assistant Child Care Teacher Program and the Employability Skills Standard Certificate Program. The Department of Public Instruction Cooperative Education Skill Standard Certificate Programs are offered at all four high schools in Business, Child Services, Family and Community Services, Food Service, Health Science, Marketing/Entrepreneurship/Retail Marketing, and Youth Leadership. The Employability Skills Standard program is offered at Madison LaFollette High School and will expand to the other three high schools in 2010-11. The Assistant Child Care Teacher Certificate Program is offered at all four high schools. Students may enroll in and earn certificates in more than one program at the same time (e.g., Assistant

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Child Care Teacher Certificate and the Employability Skills Certificate). In 2008-09, approximately 136 students enrolled in a State-Certified Coop Skill Certificate program with approximately 65 percent (88 students) earning the certificate. (available to students in grades 11-12)

Youth Apprenticeship Program

Youth Apprenticeship - offered to all MMSD 11th-12th graders in Accounting, Architecture, Automotive Technician, Biotechnology, Construction, Engineering, Finance, Health Services, Hospitality/Tourism, Information Technology, Manufacturing, Pharmacy Technician, Printing, Production Agriculture, Welding. The Coordinator of Career & Technical Education is responsible for publicizing, recruiting, selecting and overseeing all Youth Apprenticeship students. The number of Youth Apprenticeship students for the past three years are:

- 2007-08 – 25 Youth Apprenticeship students
- 2008-09 – 30 Youth Apprenticeship students
- 2009-10 – currently 32 students are enrolled in Youth Apprenticeship

School-Based Enterprise

Students receive entrepreneurial experiences and economic education through the *The Starting Your Own Business* class offered in all four high schools. The class is supported with coordination assistance and financial support from the district's Business & Education Partnership. Business leaders serve as resource speakers throughout the class and evaluate students' final business plan project. A two-day Mini-Business World is conducted for 70 students annually and is an extended learning activity of the class and also sponsored by the Business & Education Partnership. School-based enterprises or school stores are operated in three high schools through the Marketing cluster. Approximately 120 business representatives participate in "Mad City Money" during Money Smart Week.

All work-based learning programs include Personal Financial Literacy Standards. Cooperative Skill Standard Certificate teachers and Youth Apprenticeship staff members match students with employers to provide the best learning experience for students. Employer follow-up is done regularly. Teachers offering DPI Skilled Certificate programs are offered at least 60 hours of extended contract during the summer to meet with employers and secure student work-based learning placements. Youth Apprenticeship employers meet regularly with Dane County School Consortium staff to evaluate student placements. Continuous employer input allows teachers to revise programs as necessary to assure student and workforce needs are met. It is a goal and performance measure of the District's Strategic Plan to increase the number and percentage of students participating in school-sponsored community activities, including work-based learning.

G. Tech Prep Programs

PI 26.03 (3) (c) (5) Pupil access to technical education programs which have a curriculum incorporating accurate national, regional, and state labor market information, include labor market supply and demand.

Discuss how current and planned tech prep programs are provided in the district.

The Madison Area Technical College (MATC) Tech Prep program provides opportunities for educators and counselors to participate in professional development activities that include career pathways, curriculum articulation, college readiness, and strategies for informing students and parents about technical education and careers, youth apprenticeships, and adult apprenticeships. Student opportunities are also provided within career pathway areas to help students explore potential career areas. An example includes a workshop directed at women in trade and technology careers, including electrician, printer, machinist, carpenter, architectural technician, civil engineer, electronics technician, etc. In all activities, students are provided with current occupational and labor market information. Most Youth

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Apprenticeship instruction is also delivered by MATC as contracted through the Dane County School Consortium.

The Madison Metropolitan School District Coordinator of Career and Technical Education is a member of the Tech Prep Work Group. School staff members are involved in all activities of the Tech Prep Consortium. The following goals/outcomes for 2010-11 will be incorporated into Career and Technical Education activities:

- **Outcome 1:** Maintain the number and percent of secondary education tech prep students enrolled in the tech prep program who enroll in secondary education. (continue Program of Study development, Career Development Facilitator training)
- **Outcome 2:** Maintain/increase the number and percent of secondary education tech prep students enrolled in the tech prep program who enroll in postsecondary education in the same field or major as the secondary education tech prep students were enrolled in at the secondary level. (provide teachers with training on clusters/pathways knowledge and skills, emphasis areas include Culinary Arts, Manufacturing, and Business Technology)
- **Outcome 3:** Maintain/increase the number and percent of secondary education tech prep students enrolled in the tech prep program that complete a state or industry-recognized certification or licensure. (professional development on college readiness, articulation agreements, externships)

The MMSD offers the following Advance Standing courses with Madison Area Technical College: Accounting, Biotechnology, Computer Literacy, Computer Applications, Early Childhood, Health Sciences, Keyboarding, Medical Terminology, Multimedia, and Project Lead The Way courses. Students may receive Dual/Transcripted Credit in Accounting, Elementary Algebra, and Information Technology – Networking. Youth Apprenticeship courses area also offered for Advanced Standing or Dual Credit.

H. Career Development & School Counseling

PI 26.03 (3) The program shall provide to all pupils in grades kindergarten through 12 access to an education for employment program which provides for foundations in good citizenship and which links academic and occupational standards to workplace skills and experiences... (a) Career awareness at the elementary grade levels. (b) Career exploration at the middle grade levels. Career exploration shall address stereotyping and may include work based learning experiences and career research identifying personal preferences in relation to future work roles. (c) Career planning and preparation at the high school levels...

Describe how the district addresses career awareness, career exploration, and career planning and preparation at appropriate developmental levels.

For 2009-10, MMSD employs 9.20 FTE middle school counselors, 27.40 FTE high school counselors, and 1.0 FTE district-wide Program Support Counselor. The Program Support Counselor position was reinstated in the 2008-09 school year, after elimination in 2002-03. The Program Support Counselor works in conjunction with the Career and Technical Education Coordinator to implement career guidance as funded through the Carl D. Perkins Career & Technical Education Act and supported through MMSD.

Prior to a person as Program Support Counselor, the Coordinator of Career & Technical Education led the district in:

- adopting and implementing a standard development software (WisCareers) in 2006
- identifying eight career development competencies with accompanying performance standards and optional and essential learning activities for grades 6-12 (listed in Section J). These are available to all school personnel and are linked to WISCareers

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Since 2008, the Program Support Counselor involved counselors in aligning the MMSD school counseling program with all facets of the Wisconsin Comprehensive School Counseling Model (WCSCM) and the associated Model Academic Standards. The Career and Technical Education Coordinator is an active participant in initiatives related to career-awareness/career-education aspects of the WCSCM. Together the Program Support Counselor and Career and Technical Education Coordinator built consensus and support for adopting the national and state 16 Career Cluster model.

Middle school career awareness includes the *School Makes A Difference* program led by the Career and Technical Education Coordinator. The program places 310 business speakers in eleven middle schools and two alternative high schools. All 8th graders are exposed to at least eight speakers who talk about their career journey and the academic and technical skills needed in their profession. A goal of the program is to mirror each middle school student race/ethnicity population in the speaker panel so that all students can “see themselves” in one or more speakers. Several groups help achieve this goal in cultural relevance by recruiting speakers, including The Urban League, Latino Chamber of Commerce, and local employers.

Further, the amount of instructional time (in minutes) spent on middle school career guidance was assessed in 2008-09. The next step will be to determine with principals the plans for meeting the DPI minimum (4,000 minutes) and utilizing counselors' expertise in delivering and/or overseeing career guidance curricula and implementing the school counseling model.

The MMSD works with the University of Wisconsin Center on Education and Work to develop a K-12 Individualized Learning Plan (ILP). Both the Career and Technical Education Coordinator and the Program Support Counselor serve on the ILP Project Management Team. The ILP will enable students to save information from career-awareness activities, inventories and assessments, and post-secondary education searches in their WISCareers account. Through the use of the 16 Career Clusters and the list of 21st Century Skills, school staff will help students see the relevance of their present school experiences to their future career goals. In addition, the ILP will enable teachers to see the career interests of students and incorporate these interests into classroom activities. Counselors will be able to notify students by email of speakers or activities related to career interests. The Project Management Plan calls for the ILP to begin in grades 6-12 by June 2010. The elementary school plan will require additional time. Part of the ILP development project is to adopt a district-wide K-12 career awareness, career-education curriculum and to develop a delivery plan for grades 6-12. The Project Management Plan calls for all elementary students to have begun an ILP by June 2014.

Another area involving career awareness/career education is the district's work on re-designing high schools. This project, funded by a federal Smaller Learning Communities Grant, has “Innovation Teams” at each high school working in conjunction with a district-wide Innovation Team. Both the Program Support Counselor and the Career and Technical Education Coordinator serve on the district team and are called upon to present the Career Clusters/Pathway model to local school teams with the goal of career awareness/career education becoming foundational in the re-design of high schools.

Counselors work with students on career-awareness/career-education activities and planning, and with staff on embedding at all educational levels the concept of preparing students for the wide variety of post-secondary options available now and in the future. The WCSCM, ILP, and high-school re-design projects provide specific areas of focus for the district's Education for Employment initiative.

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I. 21st Century & Employability Skills

PI 26.03 (3) The program shall provide to all pupils in grades kindergarten through 12 access to an education for employment program which provides for foundations of good citizenship and which links academic and occupational standards to workplace skills and experiences.. (c) career planning and preparation at the high school levels, including all of the following... (3) instruction which provides for the practical application of academic skills and applied technologies... (4) the study of the practical application of economics and American economic institutions, include entrepreneurship education.

Describe how educators from all grade levels and through numerous disciplines use 21st century and employability skills to align instruction and create curriculum and activities designed to infuse and assess such skill proficiency within the PK-12 Education for Employment Program.

Comprehensiveness and consistency of Career & Technical Education and other curricula is a priority for MMSD. While Career & Technical Education courses are regularly revised and upgraded based on industry standards and student and parent input, building-level curriculum committees determine local school offerings and serve as a source for assuring curricular offerings link occupational standards to workplace skills. The overall Career & Technical Education program is monitored at the district level by the administrative team of the LVEC, Assistant Superintendent for Secondary Education and Executive Director of Teaching & Learning. Special emphasis is placed on academic attainment, skill proficiency attainment, completion, and diploma credential completion as these are the evaluative measures in Career & Technical Education. Measures used to address these areas include:

Academic Attainment – analysis of the number of Career & Technical Education concentrators and number of students completing Advanced Standing and Dual/Transcribed Credit course

Skill Proficiency – analysis of the number of students in work-based learning, Youth Apprenticeship, and Career & Technical Student Organizations.

Completion – analysis of the number of students completing Career & Technical Education courses and engagement in courses as measured by district survey.

Diploma Credential – analysis of the number of students completing a DPI Skill Certificate, Youth Apprenticeship Certificate, or workforce or industry license (e.g., Certified Nursing Assistant, ProStart, etc.)

Placement – analysis of the number of Career & Technical Education concentrators in postsecondary education or work that is related or directly related to their high school Program of Study.

The foundation of good citizenship is a priority in the Strategic Plan within the Curriculum, Civic Engagement priority. It is the goal of the district that schools will implement an educational approach that provides students with the knowledge, skills and experiences to participate in a democratic society by increasing the number and percent of school-sponsored community activities. The Education for Employment specifically addresses this priority by: (1) researching effective, culturally relevant standards-based practices in Civic Engagement (2) analyzing research to determine and develop productive civic engagement strategies and (3) developing and implement a pilot at the secondary-level for service learning. To date, the first Career & Technical service learning opportunity was developed in 2009-10 through the Youth Health Service Corp at East High School.

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J. Program Access, Nondiscrimination, and Closing Achievement Gaps

PI 26.03 (3) The program shall provide to all pupils in grades kindergarten through 12 access to an education for employment program which provides for foundations of good citizenship and which links academic and occupational standards to workplace skills and experiences.

Describe how the district provides every student at each grade level PK-12 access to the appropriate components of the Education for Employment Program; as well as, how the district prepares students to actively participate in diverse work settings.

The MMSD's Board of Education (BOE) policy specifies that the school district does not discriminate against employees, enrollees, or applicants for employment or enrollment on the basis of age, race, color, sex, creed, handicap, political persuasion, ancestry, religion or sexual orientation except where there is a bona fide occupational qualification. In accordance with applicable state and federal law, the school district shall have in place any required policies that prohibit sexual harassment and assault, as well as a specific complaint procedure that may be invoked by students and/or employees to address, to assist in preventing, and in responding to, sexual harassment and/or assault within the school environment. In addition, the school district shall make available to students information on programs and activities related to awareness and prevention of sexual harassment and assault.

Further *BOE Policy 4402 on Career and Technical Education Student Selection* states:

Students in the Madison Metropolitan School District will have equal access to work-based learning programs, such as cooperatives, internships, simulations and youth apprenticeships. Employees of the Madison Metropolitan School District will take affirmative steps to enroll under-represented groups in work-based learning programs, including ethnic minorities, men and women interested in non-traditional careers, and students with exceptional education needs.

Prospective students will be considered eligible for entrance into a work-based learning program when they have: (1) been classified as credit eligible or are planning to terminate their formal high school education (2) completed the required prerequisite(s) (3) a career objective in the area of desired training and (4) plans to enter employment and/or continued education related to their high school career and technical preparation.

Procedure: Career and Technical Education 4402

High School Principals will establish procedures to implement the above Policy. The procedure shall include provisions for: (1) counseling for both males and females into non-traditional careers (2) inservice for staff concerning the needs of students from under-represented groups, such as ethnic minorities, men and women interested in non-traditional careers, and students with exceptional education needs (3) flexibility in prerequisite(s) for under-represented groups who have higher than average unemployment and dropout patterns and (4) guidelines for screening qualified applicants for acceptance into work-based learning programs when the number of on-the-job training stations and/or allocations limit the number of students to be served. All High School Principals will publish this Policy and student selection procedures for work-based learning in the faculty handbook.

Further, in November 2008, Superintendent Dan Nerad, issued guidelines for Culturally Responsive Practices in MMSD schools and expanded strategies used to address disproportionality within special populations to students of color. A checklist to be used by all district staff includes assessments of frequency, intensity, and duration of interventions, involvement of students' families in the problem-solving process, extent to which race, culture, student's unique background and experiences, linguistic differences, mobility or excessive absences, life stressors, and/or socio-economic and environmental status were contributing factors to a student's learning and/or behavior difficulties.

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Ways in which the district provides every student access to the appropriate Education for Employment components include:

- Elementary Level: Students, teachers, and parents participate in a “Ready, Set, Goal” conference at the beginning of each year for the purpose ofCareers are talked about in classrooms and guest speakers are invited to talk about their jobs. Junior Achievement programs are used in many Elementary schools to help students learn the basic concepts of Business and economics and how education is relevant to the workplace. Specifically, the following JA programs are used:

- Ourselves* – kindergarten
- Our Families* – 1st grade
- Our Community* – 2nd grade
- Our City* – 3rd grade
- Our Region* – 4th grade
- Our Nation* – 5th grade

- Middle School and High School: At the middle and high school levels, students continue career awareness, exploration and planning activities. In 2006-07, the Coordinator of Career & Technical Education led middle and high school counselors in identifying eight competencies addressing components of Education for Employment that every student will perform. The competencies have performance standards and essential and optional learning activities for each grade level and include:

1. Explore how your interests, aptitudes and values relate to the world of work
2. Investigate the diversity of careers
3. Analyze how social and personal events impact career choices
4. Create, maintain and update a career e-Portfolio
5. Analyze how your personal characteristics lead to success in school and at work
6. Explore the relationship between career choice and future lifestyle
7. Outline training and activities related to your personal career plan (optional)
8. Demonstrate employability skills (optional)

The Individualized Learning Plan (ILP) as discussed in Section H will enable students to save information from career-awareness activities, inventories and assessments, and post-secondary education searches in their WISCareers account. Through the use of the 16 Career Clusters and the list of 21st Century Skills, school staff will help students see the relevance of their present school experiences to their future career goals. In addition, the ILP will enable teachers to see the career interests of students and incorporate these interests into classroom activities.

The MMSD prepares all students to actively participate in diverse work settings through the competencies listed above and through cultural diversity/global understanding priorities in the Strategic Plan. MMSD believes that "race, disability, sexual orientation, gender, home language of origin other than English, or class do not project academic achievement and that the learning environment is emotionally and physically safe and orderly, and the contributions of all are valued and respected" (MMSD Vision Statement). The educational framework on which all MMSD curricula is based fosters students' development of relationships with others through positive verbal and non-verbal communication, peaceful resolution of social conflicts, demonstration of respect, responsibility, compassion, trusting relationships, and valuing diversity. Career & Technical Education curricula incorporates specific competencies that help students build skills in working with individuals with mental, physical, and emotional disabilities. Learning activities based on these competencies will prepare students for a culturally diverse world, providing knowledge, skills and understanding for the variety of associations, relationships, diversified situations, experiences, and environments that they may encounter in the workplace.

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K. Coordination of Related District Resources

PI 26.03 (2) The plan shall identify other educational program requirements that will be included in the education for employment program, including all of the following: (a) the school districts standards under s. 121.02 (1), Stats., (b) vocational skills required under s. 118.01 (2) (b), Stats., (c) High School graduation requirements under s. 118.33, Stats., (d) Programs for children at risk under s. 118.153, Stats., (e) Tech prep under s. 118.34, Stats., (f) Youth options under s 118.55, Stats., (g) Youth apprenticeship under s 106.13 (3) to (4), Stats.....

Identify other educational resources that are currently in or will become part of the Education for Employment program. Discuss how each is coordinated and evaluated for appropriate impact on the E4E program. Include the following:

- school district standards (s121.02 (1))
- vocational skills (occupational information, preparation for postsecondary education or jobs, positive work attitudes and habits)
- high school graduation requirements
- programs for children at risk
- Tech Prep programs
- Youth Options
- Youth Apprenticeship
- other local district requirements

Student Services Career & Technical Ed and Student Services and Alternative Education - Guidance

WI Stat. 121.02(1)(e); PI 8.01(2)(e)

s. 121.02(1)(e) Provide guidance and counseling services. PI 8.01(2)(e) Provide a program of guidance and counseling services for all pupils, with the following requirements: (1) approved plan for the provision of a program of guidance and counseling services (2) a developmentally based program available to all students (3) the program shall be (a) systematically planned by licensed school counselors in collaboration with other licensed pupil services staff, teachers, parents and community health and human service professionals (b) provided by licensed school counselors in collaboration with these same groups (4) provision of developmentally appropriate educational, vocational, career, personal and social information to assist pupils in problem solving and in making decisions (5) inclusion of pupil appraisal, post-secondary planning, referral, research, and pupil follow-up activities

The District meets this standard through the school counseling program through the Director of Student Services and Alternative Education, CTE program through Coordinator of Career & Technical Education

Teaching & Learning – Career & Technical Education

Wis. Stat. 121.02(1)(m) WI Stat. 121.02(1)(K)1; WI Stat. 121.02(1)(L)3; WI Stat. 121.02(1)(L)6

See Teaching & Learning Career & Tech Ed-Education for Employment

121.02(1)(K)1 Maintain a written sequential curriculum plan in vocational education specifying objectives, course content, resources and a program evaluation method.

121.02(1)(L)3 In grades 9 to 12, provide access to an educational program that enables pupils each year to study vocational education. In this subdivision, "access" means an opportunity to study through school district course offerings, independent study, cooperative educational service agencies or cooperative arrangements between school boards and postsecondary educational institutions.

121.02(1)(L)6 In one of grades 5 to 8 and in one of grades 10 to 12, provide pupils with the instruction on shaken baby syndrome and impacted babies described in s. 253.15 (5).

The District meets this standard through the CTE program under the direction of the Coordinator of Career & Technical Education/LVEC.

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Teaching & Learning Career & Technical Ed-Education for Employment

WI Stat. 121.02(1)(m); PI 26.01; PI 26.03

The school district shall provide access to an education for employment program approved by the state superintendent. The program shall incorporate applied curricula; guidance and counseling services under par. (e); technical preparation under s. 118.34; college preparation; youth apprenticeship under s. 106.13 or other job training and work experience; and instruction in skills relating to employment.

General requirements include: (1) development of a long range plan (2) identification of other educational program requirements, including (a) school district standards under s. 121.02 (1), Stats. (b) vocational skills required under s. 118.01 (2) (b), Stats. (c) high school graduation requirements under s. 118.33, Stats. (d) Programs for children at risk under s. 118.153, Stats. (e) Tech prep under s. 118.34, Stats. (f) Youth options under s. 118.55, Stats. (g) Youth apprenticeship under s. 106.13 (3) to (4), Stats. (3) all pupils in grades K-12 will have access to an education for employment program which provides for foundations of good citizenship and which links academic and occupational standards to workplace skills and experiences, including (a) career awareness at the elementary grade levels (b) career exploration at the middle grade levels (c) career planning and preparation at the high school levels.

The District meets this standard through a 1.0 FTE of a Local Vocational Education Coordinator (LVEC) to manage the School to Work and Youth Apprenticeship programs. A partnership with the county exists for managing relationships with program employers related to the Youth Apprenticeship program. District guidance counselors are involved in screening YA applicants.

Teaching & Learning Career & Technical Ed-Education for Employment, Technical Preparation

PI 26.04; s. 118.34

PI 26.04 General requirements: (1) insure district representation on the technical preparation council as created under s. 118.34 (2), Stats. (2) designate a staff person certified under s. PI 34.32 (7) (a), to coordinate and direct the education for employment program. (3) encourage the development of business and education partnerships (6) indicate on a pupil's transcript the name of the course; the high school credits earned and whether those credits were earned through advanced standing, transcribed credit, or the advanced placement program; and the participating postsecondary institution, when appropriate.

s. 118.34 General Requirements: (1) in cooperation with a technical college district board, establish a technical preparation program in each public high school located in the school district consisting of a sequence of courses, approved by the technical college system board under s. 38.04 (26), designed to allow high school pupils to gain advanced standing in the technical college district's associate degree program upon graduation from high school.

The District meets this standard through its Coordinator of Career & Technical Education, who serves as Executive Director of the Business & Education Partnership, directs the education for employment program and tech prep program, and oversees articulation with postsecondary institutions.

Teaching & Learning - Career & Technical Ed-Education for Employment, Youth Options

WI Stat. 121.02(1)(m); s. 118.55(3)(b); s. 118.55(4)(c); s. 118.55(7r)(c); s. 118.55(5)(7t); s. 118.55(8)

Although the responsibility for Youth Options is upon the student and parent, there are mandates for the school district in the application process, including after a pupil submits an application, the school board shall determine whether the course is comparable to a course offered in the school district, and whether the course satisfies any of the high school graduation requirements under s. 118.33 and the number of high school credits to award the pupil for the course, if any. The school board shall notify the pupil of its determinations, in writing, before the beginning of the semester in which the pupil will be enrolled. If an institution of higher education admits a pupil to an alternate course, the school board shall inform the pupil of its determinations of the aforementioned parameters as soon as practicable.

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118.55(5)(7t) within 30 days after the end of the semester, the school board of the school district shall pay the institution of higher education, on behalf of the pupil, a specified amount for any course that is taken for high school credit and that is not comparable to a course offered in the school district.

118.55(7r)(c) if a child attends a technical college, at least 30 days before the beginning of the technical college semester in which the pupil will be enrolled, the school board shall notify the pupil, in writing, if a course in which the pupil will be enrolled does not meet the high school graduation requirements and whether the course is comparable to a course offered in the school district. 118.55(7t) for each pupil attending a technical college, the school board shall pay to the technical college district board, an amount equal to the cost of tuition, course fees, and books for the pupil at the technical college. 118.55(8) annually by October 1, each school board shall provide information about the Youth Options program to all 9th, 10th and 11th grade pupils.

The District meets this standard through its school counseling program through the Director of Student Services and Alternative Education, Career and Technical Education program through the Coordinator of Career & Technical Education/Local Vocational Education Coordinator

Teaching & Learning – Career & Technical Education, Carl Perkins Legislation

Career and Technical Education Improvement Act of 2006

General Assurances: (1) the eligible recipient will provide a program that is of such size, scope, and quality to bring about improvement in the quality of career education (2) a DPI certified LVEC/CTE Coordinator shall be employed by the district and shall fully oversee all aspects of the project including planning, evaluation, improvement, and implementation.

The District meets this standard through its Coordinator of Career & Technical Education, who is a certified LVEC and oversees and implements the Career & Technical Education program.

Teaching & Learning/Career & Technical Education

Standard (m); PI 26.01

- Must have education for employment council, half business/industry representatives, half teachers, administrators, pupil services, pupils, parents, etc.
- Long range plan with annual review
- Designate an individual to coordinate the education for employment program

The District meets/exceeds this standard through its Career and Technical Education Coordinator, who coordinates this program.

Teaching & Learning/Curriculum Development

Standards (j) & (k)

- Written comprehensive curriculum.
- Instruction in K-6 provided by or under supervision of a subject area teacher.
- Art and music instruction in grades 7-12 available and taught by an art or music teacher.
- Health instruction in grades 7-12 including one structured course by a health teacher.

On January 9, 1998, the Superintendent and President of Madison Teachers Inc. signed an agreement for the district to "develop standards and benchmarks to evaluate student progress and achievement." Also in 1998, the MMSD Board of Education adopted the Wisconsin Model Academic Standards for all areas in which State standards are developed. As new State standards are developed, the district will revise and upgrade curriculum to incorporate and meet those standards. MMSD is also one of the first districts in the state and nation to develop an elementary and middle school standards-based report card that communicates to parents what students should know and be able to do. The elementary standards-based

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report card was implemented progressively between 2001-05 and includes grade level performance standards. The middle school report card was implemented in 2008-09 with grade level benchmarks and performance standards in Technology Education and Family & Consumer Education as developed by CTE teachers.

The District meets/exceeds this standard through its standards-based curriculum in all core areas. The District ensures appropriate course offerings and required student scheduling for art, music and instruction. Students have access to additional music instruction at the elementary school level (grade 5)

Teaching & Learning / Information & Communications Technology

NCLB 8th Grade Technology Literacy Requirements (E2T2)

The portion of the No Child Left Behind (NCLB) Act known as 'Enhancing Education Through Technology Act of 2001' (E2T2) has a goal: "To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the 8th grade, regardless of the student's race, ethnicity, gender, family income, geographic location or disability."

The District meets this standard through its local definition of "technology literacy" as "the ability to use information and technology to improve learning, productivity and performance." Keyboarding performance (25 wpm) and the successful completion of a technology project between grades 6 and 8 are currently used to assess technology literacy.

Teaching & Learning/Staff Development

PI 8.01 (2); Standard (b)

Establish a professional staff development plan each school year designed to meet the needs of individuals or curriculum areas in each school. Involve licensed support staff, instructional staff, and administrative staff in creation of the annual professional staff development plan.

The District meets this standard through each content area coordinator's preparation of such a plan. Involvement of licensed staff occurs during the school year and in Summer Institutes.

Teaching & Learning/Talented & Gifted

WI Stat. 118.35

Each school board shall ensure that all gifted and talented pupils enrolled in the school district have access to a program for gifted and talented pupils.

The District meets this standard by dedicating 6.0 FTEs to oversee and facilitate student access.

Teaching & Learning/Talented & Gifted

Standard (t)

- Written plan
- Coordinator
- Identification in 5 talent categories
- Appropriate programs, provided without charge for tuition, K-12
- Parental participation in program planning

The District meets this standard through its 1.0 FTE administrator level position coordinating this program.

Education for Employment Plan Madison Metropolitan School District

Teaching & Learning/Technology and Learning

Standard (k)

Integrate computer literacy into the curriculum plan. To receive Ed Tech funds (entitlement or competitive), the district must have a long-range strategic educational technology plan that is consistent with the objectives of the statewide technology plan and that addresses statutory local plan requirements.

The District meets this standard.

Youth Apprenticeship, s.106.13

A work-based learning program for high school juniors and senior that is articulated with postsecondary education systems. The curriculum is based on industry-developed skill standards. The standard two-year program requires that students complete a minimum of 900 hours of paid work experience and four semester of related classroom instruction. A Certificate of Occupational Proficiency is issued to students who successfully complete the program. In addition, students may choose to enroll in a Level One program in which they must complete a minimum of 450 hours of paid work experience.

The District meets this standard.

L. Professional Development Needs and Opportunities

PI 26.03 (1) An education for employment long range plan shall be developed by the board...The plan shall include all of the following: (c) A strategy to be used in developing the education for employment program and determining staff development needs.

Describe professional development opportunities to be developed both inside and outside the district, staff involved, and a development timeline that assists the district in providing direction, substance, and quality to the implementation of the goals of the Education for Employment Plan.

Approximately 30 percent of MMSD teachers have a Professional Development Plan. There are typically two to five new Career and Technical Education teachers annually that with other new teachers, complete the District's "New Educator Support Course." For current teachers, enhanced professional development plans is also be the by-product of Career & Technical Education funding. Teachers are regularly exposed to master teaching techniques and curriculum design through exemplars such as Project Lead The Way teacher training, Worldwide Instructional Design, Understanding By Design incorporated into the District's curriculum warehousing tool, Eclipse. Overall, more than 200 district professional development opportunities exist.

MMSD's professional development plan promotes excellence in teaching for all groups of teachers, counselors, and administrators. Content relevancy is a priority in Career and Technical Education and the following professional development is provided annually:

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Career & Technical Education Professional Development

| Topic | Participants | Dates | Format |
|---|---|---|--|
| Career & Technical Education Department Chairs – Instructional Leadership | CTE Department Chairs | 9/15, 10/19, 11/9, 12/14, 1/11, 2/15, 3/15, 4/12, 5/10 | 1 day session on 9/15, after school sessions on remaining dates |
| Financial Literacy and Reality Store/Mad City Money Activities | Various CTE teachers | 10/13, 10/14, 10/15, 10/16, 12/7 (financial literacy teachers only), 1/13 (challenge bowl) | 1 day per high school for Reality Store; 1 day sessions for Business Education teachers for remaining activities |
| Business Education Career Pathway and Professional Development | Business Education Teachers | 9/16, 9/23, 10/21, 11/6, 11/25, 12/17, 1/27, 4/15 | 1 day sessions |
| Marketing Education Pathway and Professional Development | Marketing Education Teachers | 9/24, 9/25, 10/6, 11/17, 11/18, 6/4 | 1 day sessions |
| Computer Science and Information Technology Career Pathway and Professional Development | Computer Science and IT Teachers | 10/1, 11/11, 3/10, 3/11, 3/17, 4/21 | 1 day sessions |
| Family & Consumer Education Teachers Career Pathway and Professional Development | Family & Consumer Education Teachers | 10/9, 10/14, 1/20, 2/24 | 1 day sessions |
| Technology Education Teachers Career Pathway and Professional Development | Technology Education Teachers | 9/30, 10/16, 11/2, 11/17, 3/4, 3/5, 4/29, 5/13 | 1 or 2-day sessions |
| Project Lead The Way Professional Development | Technology Education and Science Teachers | 10/14, 11/11-11/13, 12/3 | 1 or 2-day sessions |
| Career & Technical Education Student Organizations (CTSOs) leadership labs and competitions at regional, state, and national events | CTE Teachers | 10/22 (FBLA), 10/26 (HOSA), 11/8-11/10 (DECA), 12/4 (DECA), 2/11-2/12 (HOSA), 3/9 (ProStart), 3/9-3/11 (DECA), 4/12-4/13 (FBLA), 4/24-4/27 (DECA), 4/25-4/27 (HOSA), 4/27-4/28 (Skills USA) | Multiple day sessions |

Education for Employment Plan Madison Metropolitan School District

Professional development needs for specific areas are determined annually by the Coordinator of Career and Technical Education in conjunction with teachers. Days are requested on the District's Substitute Teacher calendar in March and budgeted in the Carl D. Perkins Vocational and Technical Education Act. Through partnerships with MATC, Global Academy, the Dane County School Consortium, and industry groups, District staff also have opportunities to participate in ongoing professional development activities.

M. Student Transcripts, Reporting, and Accountability

PI 26.03 (1) An education for employment long range plan shall be developed by the board...It shall be defined in incremental steps and shall be modified by September 1, 2004. The plan shall be reviewed annually...and revised, if necessary, at least once every 5 years by the board...PI 26.04 (5) Upon request, the board shall make available copies of the district's education for employment plan. (6) The board shall indicate on a pupil's transcript the name of the course; the high school credits earned and whether those credits were earned through advanced standing, transcribed credit, or the advanced placement program; and the participating postsecondary institution, when appropriate.

- 1. Describe how the district Education for Employment program will be evaluated to measure program effectiveness and the process for modification and improvement.**
- 2. Identify, through a narrative explanation or through example, how coursework completed outside of the normal high school curriculum (articulation agreements including advanced standing and transcribed credit agreements, advanced placement, industry certifications, and the like) will be documented on the high school transcript.**

The Education for Employment Plan will be reviewed annually by district staff and changes will be updated every five years as required by the Department of Public Instruction. Much of the input into the Education for Employment Plan was obtained through specific discipline advisory committee meetings with business and industry representatives and from teachers through curriculum development work. After Board of Education approval, the Education for Employment Plan will be shared annually with each advisory committee, teacher group, and senior management for modifications and revisions.

Additional program effectiveness evaluative measures will be used to assess components of Education for Employment. The Vocational Education Enrollment Reporting System (VEERS) data is annually collected and analyzed by the Coordinator of Career and Technical Education to track enrollment, completion, skill attainment, and placement or postsecondary education after graduation. Career and Technical Course request data is also used to determine student interest. This information is shared with teachers and advisory committee members and compared to labor market supply and demand.

In addition, there are several evaluation mechanisms used in the district that will become more customized to evaluate Career and Technical Education. The Infinite Campus (IC) data collection system allows teachers to run ad hoc reports and use the data for program improvement, especially in documenting course requests and enrollment of special needs students. The annual MMSD measures of student engagement and school climate are used in local school Career and Technical Education department meeting.

The Coordinator of Career and Technical Education has worked to unify the Career and Technical Education programs within each high school and across the district, incorporate employability skills and career guidance in the alternative schools; and form stronger relationships between middle and high school teachers. To that end, there is now greater consistency in curricula and program implementation across the district which has strengthened the visibility and image of MMSD Career and Technical Education and resulted in program improvement.

Education for Employment Plan Madison Metropolitan School District

In January 2010, Superintendent Daniel Nerad, presented the “State of the District” report to provide important information about the district to the community and to share future priorities. The report delineated student population demographics, academic success measures, and staff and services and can be found at www.madison.k12.wi.us. Information from the report will be used with community representatives and advisory committee members in understanding the student population and district resources and capacity. The District’s Strategic Plan also included performance measures that will enhance quality in Career and Technical education.

Documentation of Career and Technical Education course work completed outside the regular curriculum will be maintained by the Coordinator of Career and Technical Education in collaboration with the district’s Chief Information Officer. The Coordinator regularly meets with Assistant Principals from the five high schools to jointly develop and enhance mechanisms through which course work is identified and documented on transcripts. The following provisions are in place:

- identification of Advanced Standing and Transcribed Credit courses on transcripts – the Coordinator of Career and Technical Education maintains the list of current articulation agreements and communicates annually with schools on changes and additions.
- identification of Youth Apprenticeship courses and grades - the Coordinator of Career and Technical Education is responsible for assuring grades are recorded accurately.
- State Certified Skill Certificate attainment (COOP, internship, certificate) is recorded annually in the Vocational Education Enrollment Reporting System.
- identification of Youth Options grades are the responsibility of each school’s Assistant Principal/Scheduler.

Appendix A – Education for Employment Plan

Appendix B – Cluster Maps

Appendix C – Course Descriptions by School

Appendix A

Education for Employment Plan

Madison Metropolitan School District
EDUCATION FOR EMPLOYMENT / CAREER & TECHNICAL EDUCATION
LONG-RANGE PLAN, 2009 – 2014

Objective 1: Ensure all MMSD students benefit from a comprehensive education that includes Career & Technical Education and career development. (CTE includes: Business Education and Information Technology, Marketing Education, Family & Consumer Science, Health Science Occupations, Technology Education and Agriculture Education).

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan - Achievement for All Students: (1) define successful MMSD graduate outcomes, including content knowledge, civic-minded skills, life-enriching skills, and social-emotional skills (2) determine the multiple pathways to success based on the definition of a successful MMSD graduate, including mapping current pathways, determining gaps based on the definition of a successful MMSD graduate, and establishing additional pathways as needed (3) implement research-based instructional strategies to eliminate the achievement gap and (4) develop and implement Individual Learning Plans.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Student Achievement | Personnel | Time Frame | Results/Evaluation | Resources |
|--|---|-------------------|--|-------------------------------------|
| 1.1 Incorporate Career & Technical Education and Career Readiness into district initiatives (e.g., Smaller Learning Communities Grant, Strategic Plan, ACT implementation and assessment plan, etc.) | CTE Coordinator, IRT, Dept. Chairs, Executive Dir T&L, Program Support Counselor, Secondary Planner, Asst Supt. Secondary | 2010-14 | Career & Technical Education and career guidance will be fully incorporated in district initiatives | Perkins funds, local district funds |
| 1.2 Include Career & Technical Education and Career Readiness in definition of successful MMSD graduate outcomes (Strategic Plan, Student Achievement, Step 1) | Same as above | 2010-14 | Successful MMSD graduate outcomes will include Career & Technical Education and Career Readiness All students will choose a Career & Technical Education course | Perkins funds, local district funds |

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| Action Step: Student Achievement | Personnel | Time Frame | Results/Evaluation | Resources |
|---|---|------------------------|--|--|
| 1.3 Lead professional development, implementation, and adoption of Career Cluster model with academic, technical, and student services personnel | CTE Coordinator, Program Support Counselor | 2010-14 | All high school course guides will be organized along career clusters in 2011-12 with all options delineated for students (2-year college, 4-year college, military, adult apprenticeship, or work directly after high school) | Perkins funds, local district funds, grant funds |
| 1.4 Career & Technical Education Coordinator to serve on ILP Leadership Team and assist with ILP design and professional development | Led by Program Support Counselor | 2010-14 | ILP to incorporate students' individual Program of Study within career cluster and showing all options after high school | Perkins funds, local district funds, grant funds |
| 1.5 Career & Technical Education teachers will pilot ILP use in classroom as facilitated by CTE Coordinator | CTE Coordinator | 2010-11 | Career & Technical Education teachers to use and teach others ways in which to incorporate ILP in classrooms | Perkins funds |
| 1.6 Increase students' career focus and technological competence in using the ILP, career portfolio, and Career Readiness assessments in Career & Technical Education classes | CTE Coordinator, Program Support Counselor | June 2010 June 2014 | ILP to begin in grades 6-12 by June 2010; ILP for elementary level to begin by June 2014 | Perkins funds, local district funds, grant funds |
| 1.7 Lead development of new and improved course selection system based on Career Clusters with electronic course guide (one guide for the district) | Coordinator Career & Technical Education, Program Support Counselor | 2011-14 | Pilot one high school in 2010-11; remaining high schools to follow in 2011-14 | Perkins funds, local district funds, grant funds |

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EDUCATION FOR EMPLOYMENT / CAREER & TECHNICAL EDUCATION
LONG-RANGE PLAN, 2009 – 2014

Objective 2: Increase opportunities for students and curriculum rigor and relevance by integrating academic, workplace and Career & Technical Education content.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Accelerated Learning: (1) map current course sequences, identifying prerequisites and obstacles (2) analyze course sequences to address inconsistencies and inequities (3) analyze course enrollment and successful completion (4) define rigor, accelerated learning and 21st Century skills (5) link curriculum to standards via Eclipse (6) increase rigor (7) increase the successful completion of courses that support college and career readiness (8) establish systems to regularly monitor successful student achievement and (9) improve course systems, including advanced placement, dual credit, online, and service learning.

Strategic Plan – Achievement: (2) determine the multiple pathways to success based on the definition of a successful MMSD graduate.

Strategic Plan – Civic Engagement: (1) research effective, culturally relevant standards-based practices in Civic Engagement (e.g., service learning) (2) analyze research to determine and develop productive civic engagement strategies for MMSD (3) develop and implement a pilot at the secondary-level for service learning.

Strategic Plan – Cultural Relevance: (1) analyze course enrollment and successful completion by student groups to determine baseline data for comparison and growth (2) Standards-based curriculum to incorporate and reflect the cultural backgrounds of district students (e.g. contemporary concerns and historic struggles of a variety of cultural groups) (3) increase staff awareness of the linguistic and cultural needs of all students, including students who are English Language Learners or Standard English Language Learners, and students who have had reduced exposure to language because of poverty, as a key to mastering standards in all content areas (4) develop goals to support cultural relevance within the School Improvement Plan (SIP) that specifically target the underserved population(s) of the school (5) explore expanding the role of community members in supporting and sustaining culturally relevant practices.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Curriculum | Personnel | Time Frame | Results/Evaluation | Resources |
|--|--|------------|--|-----------------------------------|
| 2.1 Map current courses in the five Career & Technical Education areas offered in MMSD high schools and middle schools, determine gaps based on definition of successful MMSD graduate, establish additional pathways as needed (Strategic Plan, Student Achievement, Step 2) (“Pathways” as used here include 2-year college, 4-year college, military, adult apprenticeship, or work directly after high school) | CTE Coordinator, CTE IRT, CTE Teachers | 2010-11 | All CTE courses will be mapped; current Career & Technical Education offerings will lead to all pathways | Perkins funds and Local CTE funds |

Madison Metropolitan School District
EDUCATION FOR EMPLOYMENT / CAREER & TECHNICAL EDUCATION
LONG-RANGE PLAN, 2009 – 2014

| Action Step: Curriculum | Personnel | Time Frame | Results/Evaluation | Resources |
|--|--|------------|---|-----------------------------------|
| 2.2 Analyze high school and middle school course offerings according to equity and consistency across district; assess middle to high school curricular alignment | CTE Coordinator, CTE IRT, Principals | 2009-10 | Inequities and inconsistencies identified; curricular alignment mapped between middle and high schools | Perkins funds and Local CTE funds |
| 2.3 Use data to analyze current course enrollment (baseline data) and achievement patterns and future desired results | CTE Coordinator, CTE IRT | 2009-11 | Analysis of Career & Technical Education course enrollment aggregated by school, class, and program across district for race/ethnicity, gender, special education participation and successful completion; all students will choose a Career & Technical Education course | Perkins funds and Local CTE funds |
| 2.4 Develop plan to increase enrollment of student populations under-represented in Career & Technical Education; recommend ways to increase Career & Technical Education enrollment | CTE Coordinator, CTE IRT, Principals, CTE Teachers | 2011-12 | Plan developed; ways in which to increase enrollment of under-represented populations communicated to teachers, administrators, counselors | Perkins funds and Local CTE funds |
| 2.5 Implement research-based instructional strategies in Career & Technical Education classes that eliminate the achievement gap | CTE Coordinator, CTE IRT, CTE Teachers | 2011-12 | Number and percent of students successfully completing Career & Technical Education courses will increase (Strategic Plan, Student Achievement, Performance Measure #4) | Perkins funds and Local CTE funds |

Madison Metropolitan School District
EDUCATION FOR EMPLOYMENT / CAREER & TECHNICAL EDUCATION
LONG-RANGE PLAN, 2009 – 2014

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| 2.6 Reinforce and teach standards from the academic core, ACT, WorkKeys Career Readiness assessments in Career & Technical Education classrooms | CTE Teachers, Literacy Coaches, CTE Teachers | 2009-10 | Reading literacy standards will be integrated into Health Science Occupations classes | Perkins funds and Local CTE funds |
| | | 2010-14 | Remaining ACT standards to be integrated into Career & Technical classes in Eclipse | |
| 2.7 Increase the number of advanced course offerings in Career & Technical Education | CTE Coordinator, CTE IRT, TAG Coordinator and IRT, CTE Teachers | 2010-14 | Expanded district definition of advanced courses will include capstone courses in a career sequence and articulated courses; AP Accounting will be piloted in 2010-11; percent of students participating in advanced courses will increase (Strategic Plan, Student Achievement, Performance Measure #3 and Curriculum, Accelerated Learning, Performance Measure #2, #3, #4) | Perkins funds and Local CTE funds |
| 2.8 Model district program development through curriculum relevancy, consistency of foundational Career & Technical Education courses, differentiation of specialized courses among high schools and new innovative ways of sharing resources where appropriate (e.g., academies, online facilitation, etc.) | CTE Coordinator, CTE IRT, CTE Teachers | 2010-14 | Increase opportunities for students through increased number of common course curricula and descriptions in Career & Technical Education | Perkins funds and Local CTE funds |

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LONG-RANGE PLAN, 2009 – 2014

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|---|--|---------|---|-----------------------------------|
| 2.9 Identify the need for developing career academies based on labor market/ employment needs, curricular needs, existing school capacity and need to consolidate course offerings for specialized areas (e.g., IT, broadcasting, education/teaching, criminal justice, international business, agriculture, etc.) | CTE Coordinator, CTE IRT, CTE Teachers | 2010-14 | Increased opportunities for students through research on career academies | Perkins funds and Local CTE funds |
| 2.10 Represent the district on the Global Academy planning and advisory team and incorporate Global Academy offerings into course offerings | CTE Coordinator | 2009-14 | Increased opportunities for students through collaborative curriculum and resource sharing with other school districts and postsecondary institutions | Local District funds |
| 2.11 Increase students' technical competence through all Career & Technical Education courses | CTE Coordinator, CTE IRT | 2009-14 | | Perkins funds and Local CTE funds |
| 2.12 Meet or exceed annual DPI and Federal 2008 Core Indicator Performance Standards for (1) number of CTE concentrator completer graduates with a positive follow-up outcome (2) number of CTE concentrators from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields and (3) number of CTE concentrators who participated in a program that leads to employment in nontraditional fields and graduated | CTE Coordinator, CTE IRT | 2009-14 | (1) number of concentrator CTE completer graduates with a positive follow-up outcome will be at least 95% (currently 84.9%) (2) number of CTE concentrators from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields will be at least 25% (currently 13.5%) and (3) number of CTE concentrators who participated in a program that leads to employment in nontraditional fields and graduated will be at least 90% (currently 87%) | Perkins funds and Local CTE funds |

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| | | | | |
|---|---|---------|---|-----------------------------------|
| 2.13 Determine effective, culturally relevant standards-based practices in service learning | CTE Coordinator, Career & Technical Student Org. Advisors | 2009-14 | Service learning component to be identified for all Career & Technical Student Organizations | Perkins funds and Local CTE funds |
| 2.14 MMSD Career & Technical Education classrooms will evidence positive images and cultural references (arts, curricular materials, teaching resources) for all learners | CTE Coordinator, CTE IRT | 2009-14 | Cultural relevance walk-through(s) will document the presence of standards-based curricula and classroom evidence that the cultural backgrounds of the students present are reflected | Perkins funds and Local CTE funds |
| 2.15 Identify specific strategies to build oral and written language comprehension and production across cultures, especially for helping students master technical information | CTE Coordinator, CTE IRT | 2009-14 | Strategies to assist students with technical information are identified | Perkins funds and Local CTE funds |
| 2.16 Expand the role of community members in supporting and sustaining culturally relevant practices | CTE Coordinator, CTE Teachers, Advisory Committee members | 2009-14 | Business speakers for the 8 th grade School Makes A Difference career exploration program and other programs will mirror the school's student population in race/ethnicity percentages | Perkins funds and Local CTE funds |

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LONG-RANGE PLAN, 2009 – 2014

Objective 3: Implement common course assessments, the ACT Career Readiness Assessments, WorkKeys curriculum, and a financial literacy assessment.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Assessment: (1) examine external assessments to analyze and inform MMSD curriculum, instruction and assessment (2) acquire or develop common assessments that measure individual student progress toward district learning outcomes (3) use assessment data to make continuous improvements at the classroom, school, and district levels (4) review and revise assessments regularly to reflect current research-based practices in content area (5) revise current performance reporting practices to reflect standards-based assessments.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Assessment | Personnel | Time Frame | Results/Evaluation | Resources |
|---|--|-------------------|---|-----------------------------------|
| 3.1 Develop list of external expectations in Career & Technical Education, Career Readiness, and 21 st Century Skills that connect to district standards and learning outcomes | CTE Coordinator | 2009-10 | List of expectations shared with CTE Teachers, advisory committee members, etc. | Perkins funds and Local CTE funds |
| 3.2 Lead the district in adopting ACT's Career Readiness initiative, including WorkKeys | CTE Coordinator, CTE IRT, other coordinators and senior administrators | 2009-11 | Research other states and best practices with WorkKeys/KeyTrain implementation, establish partnerships with DPI and DWD to incorporate MMSD into State Career Readiness initiatives and contracts | Perkins funds and Local CTE funds |
| 3.3 Pilot test KeyTrain curriculum in selected Career & Technical Education classrooms; provide support for selected students to take ACT WorkKeys assessments in three areas as a pre- and post-assessment | CTE Coordinator, CTE IRT, CTE Teachers | 2009-10 | Deliver KeyTrain curriculum in selected Career & Technical Education classrooms; pre- and post-test WorkKeys assessments will demonstrate KeyTrain effectiveness | Perkins funds and Local CTE funds |
| 3.4 Implement KeyTrain curriculum in all Career & Technical Education classrooms; serve as a resource to district for KeyTrain | CTE Coordinator, CTE IRT, CTE Teachers | 2010-14 | KeyTrain curriculum and WorkKeys assessments to be used in all Career & Technical Education classrooms | Perkins funds and Local CTE funds |

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| Action Step: Assessment | Personnel | Time Frame | Results/Evaluation | Resources |
|--|--|------------|---|-----------------------------------|
| 3.5 Increase students' reading, math, locating information and financial literacy through all Career & Technical Education courses using the ACT Career Readiness WorkKeys assessments and KeyTrain curriculum | CTE Coordinator, Ex Dir T&L, Language Arts IRT | | In 2010-11: (1) 100 students from two high schools will take the three ACT Career Readiness tests (2) 50% will score a 3 and earn the national Career Readiness Certificate (3) one-third of 11-12 graders will take the national JumpStart Coalition test Financial Literacy test (4) one-half of the above students will score above 75% (numbers to increase annually) (Strategic Plan, Curriculum, Accelerated Learning, Performance Measure #5 | Perkins funds and Local CTE funds |
| 3.6 Acquire or develop common assessments in district-wide common courses | CTE Coordinator, CTE IRT, CTE Teachers | 2009-10 | Common assessment for Accounting I, Starting Your Own Business, ProStart (Foods), Nursing Assistant | Perkins funds and Local CTE funds |
| | | 2010-11 | Common assessments for Business Law, Early Childhood, | |
| 3.7 Develop district-wide standards-based assessments and make recommendations on graduation requirements for Career Readiness and financial literacy | CTE Coordinator, CTE IRT, CTE Teachers | | Researched implications of incorporating Career Readiness and financial literacy as measure of a successful MMSD graduate | Perkins funds and Local CTE funds |

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EDUCATION FOR EMPLOYMENT / CAREER & TECHNICAL EDUCATION
LONG-RANGE PLAN, 2009 – 2014

Objective 4: Provide students with different delivery models based on real-world experiences beyond the classroom, including work-based learning.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Curriculum, Flexible Instruction: (1) research best practices in flexible instruction (e.g. differentiation, universal design) in order to agree upon a working definition for MMSD (2) curriculum, instruction and assessment design and decisions require teacher teams to collaborate in order to meet the needs of all students in a classroom environment. Teams will include representation from regular education, special education, ESL and gifted programming based on the student’s needs (3) students and teachers collaborate to ensure there is a range of learning activities that are engaging and multiple ways to demonstrate learning.

Strategic Plan – Civic Engagement: (1) research effective, culturally relevant standards-based practices in Civic Engagement (2) analyze research to determine and develop productive civic engagement strategies (3) develop and implement a pilot at the secondary-level for service learning.

Strategic Plan – Curriculum, Civic Engagement: (1) implement an educational approach that provides students with the knowledge, skills, and experiences to participate in a democratic society.

Strategic Plan – Organization/Systems, Partnerships: (1) increase high quality collaboration and partnerships with civic, business, higher education, parents, families and community organizations aligned with strategic priorities (2) students will have the opportunity to connect with the extended school community through volunteer programs, mentorships, job shadowing, internships, and business partnerships with schools (3) students will benefit from “real world” learning experiences created through community collaborations and alliances with business and industry (4) teachers and staff will seek opportunities for connecting classroom instruction with community resources.

REaL Grant Goals: (1) increase academic success for all students and (2) strengthen student-to-student and student-to-adult relationships (3) improve postsecondary outcomes for all students.

| Action Step: Work-Based Learning | Personnel | Time Frame | Results/Evaluation | Resources |
|---|---|-------------------|---|-----------------------------------|
| 4.1 Research effective, culturally relevant standards-based practices in Civic Engagement, including work-based learning | CTE Coordinator, Teach & Learn | 2009-11 | Effective models of work-based learning/civic engagement identified. | Perkins funds and Local CTE funds |
| 4.2 Identify and highlight existing examples of flexible instruction/civic engagement provided through the range of work-based learning opportunities (e.g., internships, Cooperative Education, Youth Apprenticeship, simulations, etc.) | CTE Coordinator, CTE teachers, Advisory Committee members | 2009-10 | Instruction will include multiple options for student learning, range of instructional methods, and assessment strategies in all classrooms; increased academic success of all students as measured by district, state and national assessments | Perkins funds and Local CTE funds |

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| Action Step: Work-Based Learning | Personnel | Time Frame | Results/Evaluation | Resources |
|--|--|------------|---|-----------------------------------|
| 4.3 Develop new work-based learning methodologies to serve all students; develop service learning pilot within Career & Technical Education | CTE Coordinator, CTE teachers, Advisory Committee members | 2010-14 | Implementation of a general internship class; number of students earning a State Skill Certificate will increase by 20% annually (currently at 135); service learning pilot developed | Perkins funds and Local CTE funds |
| 4.4 Assure incorporation of work-based learning methodologies in MMSD's definition of civic engagement and service learning | CTE Coordinator, Social Studies IRT, Executive Director of Teaching & Learning | 2009-10 | Career & Technical Education Work-Based Learning methodologies will be incorporated into the MMSD definition of service learning | Perkins funds and Local CTE funds |
| 4.5 Develop and implement a pilot service-learning experience for students | Career & Technical Student Organization Advisors | 2009-10 | Youth Health Service Corps to be implemented at East High School | Perkins funds and Local CTE funds |
| | | 2010-14 | Service learning to be implemented in all Career & Technical Student Organizations | |
| 4.6 Increase the civic engagement of students by increasing the number of Youth Apprenticeship, COOP students, interns, and other business connections for students; build employer base to accommodate student internships and service learning | CTE Coordinator, CTE IRT, CTE Teachers | 2009-14 | Number of students in work-based learning and service learning will increase | Perkins funds and Local CTE funds |

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Objective 5: Provide continuous professional development to staff in effective teaching, leadership, and contemporary industry-based skills.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Staff, Professional Development: (1) develop site-based and district-wide professional learning communities/teams to foster continuous improvement in leadership and in quality instructional practices for all students in all curricular areas, including cultural relevance (2) all staff members will regularly collaborate within one or more established professional learning communities/teams to engage in a continuous cycle of improvement focused on student learning and engagement and workplace culture.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Staff | Personnel | Time Frame | Results/Evaluation | Resources |
|---|--|---------------------|---|---|
| 5.1 Develop Career & Technical Education teams/learning communities in each high school to collaboratively address issues and implement CTE | CTE Coordinator, CTE teachers | 2009-10 | All high schools will develop a unified Career & Technical Education internal team | Perkins funds and Local CTE funds |
| 5.2 Increase Career & Technical Education teacher engagement on the Smaller Learning Community grant activities, especially the Innovation Team in each high school | CTE Coordinator, CTE teachers | 2009-10 and ongoing | All Career & Technical Education Department Chairs will be on the Innovation Team or an SLC Committee; the number of CTE teachers overall on these teams will also increase | Perkins funds, Local CTE funds, and SLC Grant funds |
| 5.3 All staff will regularly participate in at least one professional learning curricular team focusing on student learning, engagement, inclusion, differentiation, and workplace literacy | CTE Coordinator, CTE teachers | 2009-10 and ongoing | Participation rates in core professional development sessions will increase; staff utilizes inclusive practices | Perkins funds, Local CTE funds, and SLC Grant funds |
| 5.4 Lead professional development for teachers and counselors in adopting Career Clusters, the ILP, Career Readiness, WorkKeys assessments, and KeyTrain curricula | CTE Coordinator, CTE IRT, CTE teachers | 2009-10 and ongoing | Career & Technical Education teachers will pilot Career Readiness curricula and the WorkKeys tests; teachers will model incorporation of career development into classroom activities through the ILP | Perkins funds and Local CTE funds |

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| Action Step: Staff | Personnel | Time Frame | Results/Evaluation | Resources |
|--|---|---------------------|--|-----------------------------------|
| 5.5 Support and facilitate Career & Technical Education teachers in maintaining subject matter currency | CTE Coordinator, CTE IRT | 2009-10 and ongoing | Students are provided contemporary, industry-based curricula | Perkins funds and Local CTE funds |
| 5.6 Analyze staff allocation to Career & Technical Education across the district | CTE Coordinator, HR | 2009-10 and ongoing | Inequities and challenges to staffing identified in each high school and for the district | Perkins funds and Local CTE funds |
| 5.7 Research effective staff allocation practices (e.g., shared staffing across schools for specialized subjects, program/district-based staffing, etc.) | CTE Coordinator, Ex Dir T&L, Asst Supt – Sec, Principals, Asst Prin, HR | 2009-10 and ongoing | Additional and innovative staffing models will be identified and implemented to accommodate Career & Technical Education future directions | Perkins funds and Local CTE funds |

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Objective 6: Develop a 3- to 5-year long-range plan for equipment and technology resources and allocations.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Resource/Capacity, Prioritize and Allocate Resources: (1) tie budgetary decisions to a system-wide measurement tool (2) evaluate current use of technology resources to identify where resources are underutilized and determine methods for how technology resources can be used to improve effectiveness (3) conduct secondary research to determine what is effective, focusing on rigorous research models; draw upon UW resources for learning about what other districts have done (4) develop a five-year district budget plan and roadmap to determine how we would implement it (5) analyze possible partnerships and collaborations (private, public, state) which might aid in more efficient delivery of service and funding strategies.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Technology and Equipment | Personnel | Time Frame | Results/Evaluation | Resources |
|--|--|---------------------|---|-----------------------------------|
| 6.1 Conduct a facilities utilization study and technology study of all Career & Technical Education classrooms | CTE Coordinator, CTE teachers, Building Services, Tech Services | 2009-10 | Data used to analyze facility use and technology needs | Perkins funds and Local CTE funds |
| 6.2 Analyze/compare current facilities and technology with future effective program directions | CTE Coordinator, CTE teachers, Building Services, Tech Services | 2009-10 and ongoing | Gaps identified in capacity of current facilities and technology to accommodate future program needs identified and shared with district leaders; inventory document will be used in planning | Perkins funds and Local CTE funds |
| 6.3 Develop plan for equipment and facility needs according to needing repair, purchase new, or replace | CTE Coordinator, Ex Dir T&L, Asst Supt – Sec, Principals, Asst Prin, HR | 2009-10 and ongoing | Long-range plan developed for equipment and technology needs | Perkins funds and Local CTE funds |

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| Action Step: Technology and Equipment | Personnel | Time Frame | Results/Evaluation | Resources |
|---|---|-------------------|---|-------------------------------|
| 6.4 Develop a multi-year plan to accommodate future Career & Technical Education programming by leveraging resources (including resources from business and industry, private, public, and state entities) from the Technology Plan and Building Services | CTE Coordinator, CTE teachers, Building Services, Tech Services | 2009-14 | Futuristic plan for financing/providing for balancing program needs and fiscal resources | Perkins funds and Local funds |
| 6.5 Implement an online donation site for Career & Technical Education equipment | CTE Coordinator, CTE IRT, CTE Department Chairs | 2009-14 | Website available for matching donations with needs; community increase in donations, acceptance of donations based on need and at the discretion of teachers/Department Chairs | Perkins funds and Local funds |

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Objective 7: Evaluate the Career & Technical Education program.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Resource/Capacity, Rigorous Evaluation: (1) conduct rigorous evaluations of programs, services, and personnel.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Evaluation | Personnel | Time Frame | Results/Evaluation | Resources |
|---|---|-------------------|--|-----------------------------------|
| 7.1 Assess the extent to which each Career & Technical Education program meets the DPI's Career and Technical Education Program Standards (Phase I – Self Assessment) | CTE Coordinator, CTE IRT, CTE Teachers | 2010-11 | Report on Career & Technical Education Program Standards presented to senior management and shared with teachers, advisory committee members | Perkins funds and Local CTE funds |
| 7.2 Utilize advisory committee members, teachers, parents, students, business and community representatives, and postsecondary partners in assessment (Phase II – External Evaluation) | CTE Coordinator, CTE IRT, CTE Teachers | 2011-12 | Assessment evidence reflected in advisory committee minutes | Perkins funds and Local CTE funds |
| 7.3 Conduct in-depth evaluation on selected programs to determine graduate success, employer perspective, student interest, staff involvement, advisory committee feedback, parents' perception, and postsecondary partners input | CTE Coordinator, CTE IRT, CTE Teachers, MMSD Research & Planning Office | 2011-14 | In-Program evaluation will reveal need for program continuation | Perkins funds and Local CTE funds |
| 7.4 Benchmark MMSD Career and Technical Education programs to neighboring districts and similar large district | CTE Coordinator, CTE IRT, CTE Teachers, MMSD Research & Planning Office | 2011-14 | Comparisons to other schools districts shared with senior management | Perkins funds and Local CTE funds |

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| Action Step: Evaluation | Personnel | Time Frame | Results/Evaluation | Resources |
|---|---|-------------------|---|-----------------------------------|
| 7.5 Identify Strategic Plan Performance Measures to which Career and Technical Education data relate; report results to Superintendent | CTE Coordinator, Executive Director Teaching and Learning | 2009-13 | Performance measure data reported to Superintendent | Perkins funds and Local CTE funds |
| 7.6 Develop a plan for incorporating and utilizing evaluation data in future programming (Phase III – Utilization of Evaluation Findings) | CTE Coordinator, CTE IRT, CTE Teachers, MMSD Research & Planning Office, Executive Director of Teaching & Learning | 2010-14 | Evidence that evaluation data was used | Perkins funds and Local CTE funds |

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Objective 8: Increase awareness of Career & Technical Education and partnerships with MMSD staff and business and community members.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Organization/Systems, Partnerships: (1) increase high quality collaboration and partnerships with civic, business, higher education, parents, families and community organizations aligned with strategic priorities (2) students will have the opportunity to connect with the extended school community through volunteer programs, mentorships, job shadowing, internships, and business partnerships with schools (3) students will benefit from “real world” learning experiences created through community collaborations and alliances with business and industry (4) teachers and staff will seek opportunities for connecting classroom instruction with community resources (5) MMSD will seek to develop and support additional partnerships that are mutually beneficial to both the district and the partnering individual or group, that add value to and meet one of the district’s goals and/or priorities.

REaL Grant Goals: (1) increase academic success for all students and (2) improve postsecondary outcomes for all students.

| Action Step: Partnerships | Personnel | Time Frame | Results/Evaluation | Resources |
|---|------------------------------------|-------------------|--|--|
| 8.1 Lead collaboration with the Business & Education Partnership | CTE Coordinator | 2009-14 | Staff liaison to the Business & Education Partnership; business and industry representatives are incorporated more fully into classrooms | Perkins funds and Local CTE funds |
| 8.2 Strengthen linkages between the City of Madison’s Economic Development Office, THRIVE, Workforce Development Board, Junior Achievement, Urban League, Latino Chamber of Commerce, and other major business groups | CTE Coordinator, CTE IRT | 2009-14 | Closer relationship with city offices established; plan developed that delineates collaboration and future joint activities with each group | Perkins funds and Local CTE funds |
| 8.3 Define the economic and occupational impact of Career & Technical Education (CTE) to the region, state, nation, and society by utilizing national education, industry and skill standards | CTE Coordinator, IRT, CTE teachers | 2009-10 | Economic impact of sample group of MMSD graduates measured and analyzed (e.g., Certified Nursing Assistants, COOP and Youth Apprenticeship students, etc.) | Perkins funds, Local CTE funds, and district funds |

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| Action Step: Partnerships | Personnel | Time Frame | Results/Evaluation | Resources |
|--|--|-------------------|---|--|
| 8.4 Work with employers and the Department of Workforce Development to build employer knowledge and expectation for the national Career Readiness Certificate | CTE Coordinator, CTE IRT | 2009-14 | Local employers will ask MMSD graduates for Career Readiness certificate | Perkins funds and Local CTE funds |
| 8.5 Build sustainability model and develop mechanisms through which the business community can regularly invest in the economic development of students and the future workforce; increase the number of business representatives in MMSD classrooms | CTE Coordinator, CTE IRT, Superintendent, Asst. Superintendent | 2009-14 | Business representatives are incorporated into all CTE classes | Perkins funds, Local CTE funds, and district funds |
| 8.6 Develop mechanisms in which business and community members can regularly invest in the economic development of students and the future workforce | CTE Coordinator, CTE IRT | 2009-14 | Business and community support will increase | Perkins funds and Local CTE funds |
| 8.7 Raise private sector funds to support preparation for postsecondary education and work | CTE Coordinator, CTE IRT | 2009-14 | Donations from the private sector via the Foundation for Madison Schools will increase | |
| 8.8 Increase support and build communication systems to advance Career & Technical Education with academic areas, ELL, special education, guidance, and administration | CTE Coordinator, Ex Dir T&L, IRT, Asst Supt. Principals | 2009-14 | Career & Technical Education viewed as a vital and necessary part of all school initiatives | Perkins funds, Local CTE funds, district funds |
| 8.9 Enhance and/or establish advisory committees in 11 pathways to assist in determining direction and long-range goals for Career & Technical Education | CTE Coordinator, CTE IRT | 2009-11 | Advisory committees established in each pathway | Perkins funds and Local CTE funds |

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Objective 9: Increase Career & Technical Education leadership and staff support to implement the Education for Employment plan and administer enhanced Career & Technical Education that provides equitable, comprehensive, relevant, standards-based CTE opportunities for all MMSD students.

Strategic Plan Components and REaL Grant Goals to which this Objective Relates:

Strategic Plan – Organization/Systems, Decision-Making: The district will develop clear decision-making processes that are transparent, collaborative, and lead to well-reasoned decisions that are aligned with district priorities.

REaL Grant Goals:

| Action Step: Leadership | Personnel | Time Frame | Results/Evaluation | Resources |
|---|--|-------------------|---|------------------------------------|
| 9.1 Increase Career & Technical Education leadership at the district level to build and sustain community partnerships with education, business, and governmental sectors, seek outside funding and resources | CTE Coordinator | 2010-11 | Career & Technical IRT allocation to increase by 1.0 FTE; increased district support for economic development | Local CTE funds and district funds |
| 9.2 Serve as a model and lead the district in curriculum consistency, serving special needs learning, and partnering with business | CTE Coordinator, CTE IRT, CTE Teachers | 2009-14 | Career & Technical Education image will be enhanced | Local CTE funds and district funds |
| 9.3 Implement Tech Prep, Youth Options, Youth Apprenticeship as required under State Statutes | CTE Coordinator, CTE IRT, CTE Teachers, Dir. of Alternative Programs | 2009-14 | Programs will be implemented as required by State Statutes | Local CTE funds and district funds |

Appendix B

Cluster Maps



The Business Management and Administration career cluster encompasses planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business management and administration career opportunities are available in all sectors of the economy.

All students are encouraged, but not required, to join DECA at East, La Follette, and West, and Future Business Leaders of America (FBLA) at Memorial.

| Grade (may vary by school) | | | | Course Length * | Name of Course | Credit | School | | | |
|-------------------------------|----|----|----|--------------------|---|--------|--------|-------------|----------|------|
| 9 | 10 | 11 | 12 | | | | East | La Follette | Memorial | West |
| ❖ | ❖ | ❖ | ❖ | Semester | Keyboarding | .5 | | ❖ | ❖ | ❖ |
| ❖ | ❖ | ❖ | ❖ | Semester | Advanced Keyboarding | .5 | | | ❖ | ❖ |
| ❖ | ❖ | ❖ | ❖ | Semester | Computer Literacy (LF) Computer Applications (E, W) Microsoft Office Suite (M) | .5 | ❖ | ❖ | ❖ | ❖ |
| | ❖ | ❖ | ❖ | Semester | Computer Literacy 2 | .5 | | ❖ | | |
| ❖ | ❖ | ❖ | ❖ | Semester | Computer Applications | .5 | ❖ | | | ❖ |
| ❖ | ❖ | ❖ | ❖ | Year | Microsoft Office Suite | 1 | | | ❖ | |
| | ❖ | ❖ | ❖ | Year | Accounting 1 | 1 | ❖ | ❖ | | ❖ |
| ❖ | ❖ | | | Semester | Introduction to Accounting Concepts | .5 | | | ❖ | |
| | | ❖ | ❖ | Year | Accounting for Dual Transcribed Credit Accounting II (Dual Transcribed Credit) (W) Accounting 2 for Dual/Transcribed Credit (L) | 1 | ❖ | ❖ | ❖ | ❖ |
| | | ❖ | ❖ | Year | AP Accounting | 1 | | | ❖ | |
| | ❖ | ❖ | ❖ | Semester | Personal Finance Money Management/Personal Finance (W) | .5 | ❖ | ❖ | ❖ | ❖ |
| | ❖ | ❖ | ❖ | Semester | Business Law (E) Business and Personal Law (LF) Business and Personal Law 1 (M) Business and Personal Law 2 (M) | .5-1 | ❖ | ❖ | ❖ | ❖ |
| | ❖ | ❖ | ❖ | Semester | Business and Personal Law (LF) | .5 | | ❖ | | ❖ |
| | | ❖ | ❖ | Semester | Business and Personal Law 1 (M) | .5 | | | ❖ | |
| | | ❖ | ❖ | Semester | Business and Personal Law 2 (M) | .5 | | | ❖ | |
| ❖ | ❖ | | | Semester | Introduction to Business and Marketing | .5 | | | | ❖ |
| ❖ | ❖ | ❖ | | Semester | Introduction to Business Careers | .5 | | | ❖ | |
| | ❖ | ❖ | ❖ | Semester | International Business | .5 | | | ❖ | |
| | ❖ | ❖ | ❖ | Semester | International Business and the Global Experience | .5 | | ❖ | | |
| | ❖ | ❖ | ❖ | Semester | Business Economics | .5 | | ❖ | | |
| | | ❖ | ❖ | Year | Economics AP | 1 | | ❖ | | |
| ❖ | ❖ | ❖ | ❖ | Semester | Career Exploration | .5 | | ❖ | | |
| | | ❖ | ❖ | Year | Career Internship | 1-2 | | ❖ | | |

* -- The course length specified in this chart reflects courses at East, Memorial, and West High Schools. La Follette uses a four-block schedule, therefore, courses are taught in either terms or semesters.



Business courses are also found in the Information Technology career cluster. The related pathways prepare students for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.



Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Related Pathways:

- Audio and Video Technology and Film
- Printing Technology
- Visual Arts
- Performing Arts
- Journalism and Broadcasting
- Telecommunications

| Grade (may vary by school) | | | | Course Length * | Name of Course | Credit | School | | | |
|-------------------------------|----|----|----|----------------------|--|--------|--------|-------------|----------|------|
| 9 | 10 | 11 | 12 | | | | East | La Follette | Memorial | West |
| ❖ | ❖ | ❖ | ❖ | Semester | Information Technology-IT Fundamentals (L) | .5 | | ❖ | | |
| ❖ | ❖ | ❖ | ❖ | Semester (W) Year | Introduction to Programming (M) Introduction to Computer Programming (W) Introduction to Programming (L) | .5-1 | | ❖ | ❖ | ❖ |
| | ❖ | ❖ | ❖ | Year | Computer Science A AP | 1 | | ❖ | ❖ | ❖ |
| ❖ | ❖ | ❖ | ❖ | Semester | Computer Hardware/Software Repair & Essentials (L) Computer Hardware/Software Essentials (M) | .5 | | ❖ | ❖ | |
| | ❖ | ❖ | ❖ | | Networking Concepts 1 | .5 | | | ❖ | |
| | ❖ | ❖ | ❖ | | Networking Concepts 2 | .5 | | | ❖ | |
| ❖ | ❖ | ❖ | ❖ | Semester | Computer Media in Technology | .5 | ❖ | ❖ | | |
| ❖ | ❖ | ❖ | ❖ | Semester | Introduction to Graphic Design (E) Desktop Publishing and Graphic Design (L) | .5 | ❖ | ❖ | | |
| ❖ | ❖ | ❖ | ❖ | Semester Year | Graphic Design 2 – Yearbook/Publications (E) Yearbook Design and Publishing (L) The Lance: Newspaper Publishing and Writing for Media (L) Advanced Web Design (E, semester) Desktop Publishing (M) | .5-1 | ❖ | ❖ | ❖ | |
| ❖ | ❖ | ❖ | ❖ | Semester | Web-Page Design (L) Adobe Dreamweaver (M) FrontPage Web Page Design (M) Web Development & Email Systems (M) Web Design 1 (E) Web-Page Design for Business/Marketing (W) | .25-.5 | ❖ | ❖ | ❖ | ❖ |
| | ❖ | ❖ | ❖ | Semester | Introduction to Film and Video Production | .5 | ❖ | | | |
| | | ❖ | ❖ | Semester | Advanced Video and Film Production | .5 | ❖ | | | |
| ❖ | ❖ | ❖ | ❖ | Semester | Web 2.0 –21 st Century Literacies | .25-.5 | | ❖ | ❖ | |

* – The course length specified in this chart reflects courses at East, Memorial, and West High Schools. La Follette uses a four-block schedule, therefore, courses are taught in either terms or semesters.



The Marketing Career Cluster includes planning, managing, and performing marketing activities to reach organizational objectives.

All students are encouraged, but not required, to join DECA at East, LaFollette, and West, and Future Business Leaders of America (FBLA) at Memorial.

| Grade (may vary by school) | | | | Course Length * | Name of Course | Credit | School | | | |
|-------------------------------|----|----|----|--------------------|---|--------|--------|-------------|----------|------|
| 9 | 10 | 11 | 12 | | | | East | La Follette | Memorial | West |
| ❖ | ❖ | ❖ | ❖ | Semester | Marketing (E, L, M) Marketing & Sales (W) | .5-1 | ❖ | ❖ | ❖ | ❖ |
| ❖ | ❖ | ❖ | ❖ | Semester | Advertising & Sales (L) Advertising & Display (W) | .5 | | ❖ | | ❖ |
| | ❖ | ❖ | ❖ | Semester | Sports & Entertainment Marketing (L, M) Sports, Hospitality & Entertainment Marketing (W) | 1 | | ❖ | ❖ | ❖ |
| | ❖ | ❖ | ❖ | Semester | Starting Your Own Business Starting A Business (W) | .5 | ❖ | ❖ | ❖ | ❖ |
| ❖ | ❖ | | | Semester | Introduction to Business & Marketing | .5 | | | | ❖ |
| | | | ❖ | Year | Marketing Management | 1 | | | ❖ | |
| | | | ❖ | Year | Advanced Marketing | 1 | | | | ❖ |
| | ❖ | ❖ | ❖ | Semester | Leadership Development (L) Leadership Skills (W) | .5 | | ❖ | | ❖ |
| | | ❖ | ❖ | Semester/Year | Career Internship (L) Marketing Internship (M,W) | 1-2 | | ❖ | ❖ | ❖ |
| | | | ❖ | Year | School Store Marketing Management | 2 | | ❖ | | |
| | ❖ | ❖ | ❖ | Year | Store Management | 1 | | | | ❖ |
| | | ❖ | ❖ | Year | Store Management II | 1 | | | | ❖ |

* -- The course length specified in this chart reflects courses at East, Memorial, and West High Schools. La Follette uses a four-block schedule, therefore, courses are taught in either terms or semesters.



One additional cluster area that may include Family and Consumer Science courses is the Human Services career cluster. Pathways in this cluster prepare individuals for employment in careers that relate to families and human needs.

Students are encouraged, but not required, to join related student organizations such as HOSA or Future Educators.

| Grade (may vary by school) | | | | Course Length * | Name of Course | Credit | School | | | |
|-------------------------------|----|----|----|--------------------|---|--------|--------|-------------|----------|------|
| 9 | 10 | 11 | 12 | | | | East | La Follette | Memorial | West |
| | ♦ | ♦ | ♦ | Semester | Child Development I | .5 | ♦ | ♦ | | ♦ |
| | ♦ | ♦ | ♦ | Semester | Child Development II | .5 | ♦ | ♦ | | ♦ |
| | | ♦ | ♦ | Semester | AS Careers with Children | .5 | ♦ | | | |
| ♦ | ♦ | ♦ | ♦ | Semester | PEP Leadership 1 | .5 | ♦ | | | |
| | | ♦ | ♦ | Semester | PEP | .5 | ♦ | | | |
| | | ♦ | ♦ | Semester | Community Studies | .5 | | | ♦ | |
| ♦ | ♦ | ♦ | ♦ | Semester | Culinary Basics | .5 | ♦ | ♦ | ♦ | ♦ |
| ♦ | ♦ | ♦ | ♦ | Semester | Chef II | .5 | | | | ♦ |
| ♦ | ♦ | ♦ | ♦ | Semester | International Cuisine | .5 | ♦ | ♦ | ♦ | ♦ |
| | ♦ | ♦ | ♦ | Semester | Gourmet Chef 1/ProStart | .5 | ♦ | ♦ | ♦ | ♦ |
| | | ♦ | ♦ | Semester | Gourmet Chef 2/ProStart | .5 | ♦ | | ♦ | |
| | | ♦ | ♦ | Semester | Independent Living | .5 | ♦ | ♦ | | |
| ♦ | ♦ | ♦ | ♦ | Semester | Clothing Construction & Careers (E) Sewing Basics (L) | .5 | ♦ | ♦ | | |
| ♦ | ♦ | ♦ | ♦ | Semester | Sewing II | .5 | | ♦ | | |
| | ♦ | ♦ | ♦ | Semester | Sewing III | .5 | | ♦ | | |
| | ♦ | ♦ | ♦ | Semester | Interior Design & Entrepreneurship (E) Housing and Interior Design (L) | .5 | ♦ | ♦ | | |
| | | ♦ | ♦ | Semester | Marriage and Family Living | .5 | | ♦ | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

* -- The course length specified in this chart reflects courses at East, Memorial, and West High Schools. La Follette uses a four-block schedule, therefore, courses are taught in either terms or semesters.



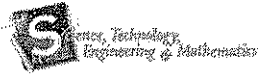
Health Science courses benefit students interested in the Health Science Career Cluster area. Related pathways provide students with a foundation for planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Students are encouraged, but not required, to join the related student organizations of Health Occupations Students of America (HOSA).

| Grade (may vary by school) | | | | Course Length other high schools/LaF | Name of Course | Credit | School | | | |
|-------------------------------|----|----|----|---|--|---------|--------|------------|----------|------|
| 9 | 10 | 11 | 12 | | | | East | LaFollette | Memorial | West |
| | ! | ! | ! | Semester/Term | Health Science Occupations I | .5 | ! | ! | ! | ! |
| | ! | ! | ! | Semester/Term | Health Science Occupations II | .5 | ! | ! | ! | |
| | | ! | ! | Semester/Term | Health Science Occupations III | .5 | | ! | | |
| | ! | ! | ! | Semester | Nursing Assistant (taught within Health Science Occupations III at LaFollette) | .75 - 1 | ! | | ! | |
| | ! | ! | ! | Term | Medical Terminology | .5 | | ! | | |
| | | ! | ! | Semester | Medical Terminology for Dual/Transcripted Credit (for 2010-11) | .5 | | | | ! |
| | ! | ! | ! | Semester | Health Information Office Assistant/Medical Office Assistant | .5 | ! | | ! | |



Technology and Engineering Education courses will benefit students interested in the Architecture & Construction career cluster area. Careers in designing, planning managing, building and maintaining the built environment are associated with the programs of study within this cluster.



Technology and Engineering Education courses are very relevant to the Science, Technology, Engineering and Mathematics career cluster area. Pathways within this cluster have been outlined on the following page to help students with career planning in this area. In addition, a program of study specific to engineering has been created to allow students to align high school courses with post-secondary opportunities.



Courses in this area help prepare for the Transportation, Distribution & Logistics cluster, where students learn about planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water, and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

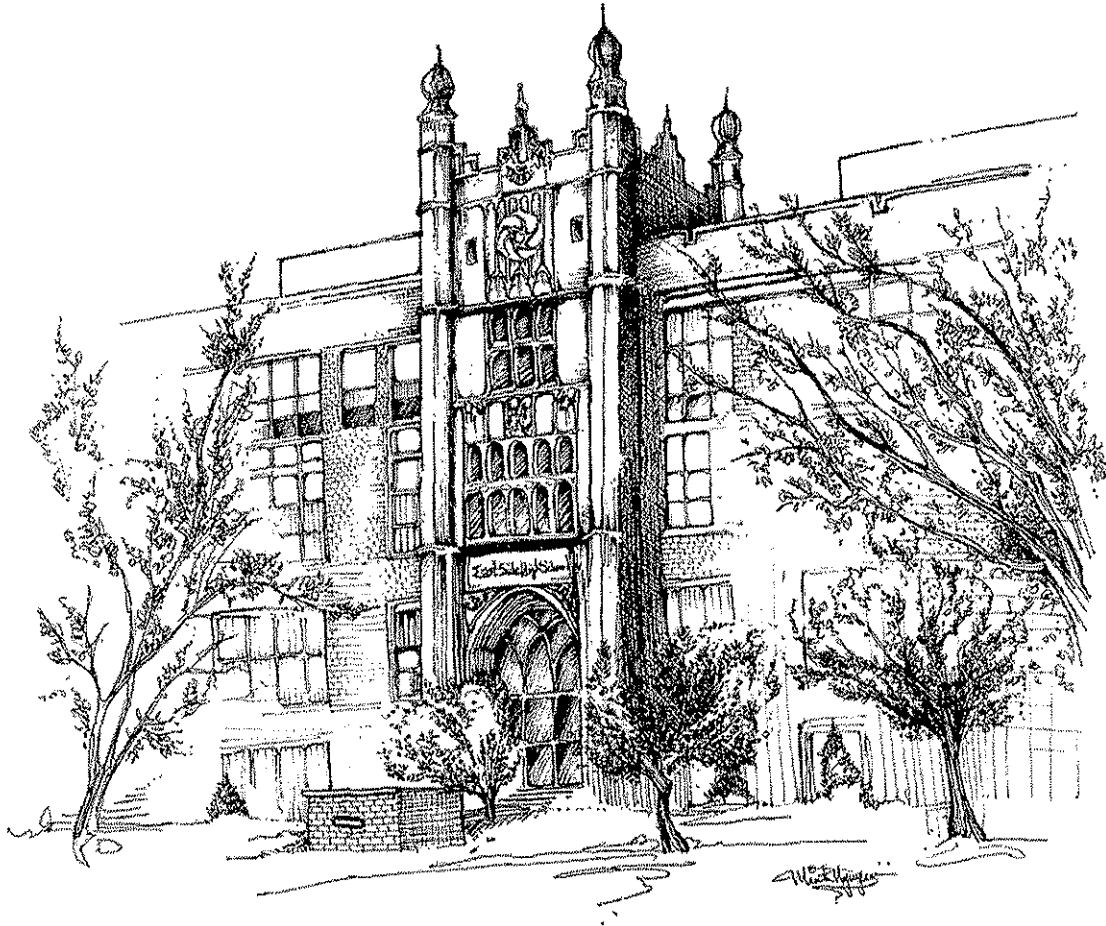
Students are encouraged, but not required, to join the Skills USA related student organization.

| Grade (may vary by school) | | | | Course Length other high schools/LaF | Name of Course | Credit | School | | | |
|-------------------------------|----|----|----|---|--|--------|--------|------------|----------|------|
| 9 | 10 | 11 | 12 | | | | East | LaFollette | Memorial | West |
| ! | ! | ! | ! | Semester/Term | Outdoor Power Equipment Technology | .5 | ! | ! | ! | ! |
| ! | ! | ! | ! | Semester/Term | Consumer Auto | .5 | ! | ! | ! | ! |
| ! | ! | ! | ! | Semester/Term | Automotive Technology 1/Engine Systems | .5 | ! | ! | ! | ! |
| | ! | ! | ! | Year/Semester | Automotive Technology 2 | 1 | ! | ! | ! | |
| | | ! | ! | Year/Semester | Automotive Technology 3 | 1 | | ! | ! | |
| | | ! | ! | Year/Semester | Automotive Technology 4/Advanced Engines | 1 | | ! | ! | |
| | | ! | ! | Year | Youth Apprenticeship/Automotive Repair | 1 | | | ! | |
| ! | ! | ! | ! | Year/Semester | Introduction to Engineering (PLTW) | 1 | ! | ! | ! | ! |
| | ! | ! | ! | Year/Semester | Principles of Engineering (PLTW) | 1 | ! | ! | ! | ! |
| | ! | ! | ! | Year | Digital Electronics (PLTW) | 1 | ! | | | |
| | | ! | ! | Year/Semester | Civil Engineering & Architecture (PLTW) | 1 | | ! | ! | ! |
| | | ! | ! | Semester | Civil Engineering & Architecture 2 | | | ! | | |
| ! | ! | ! | ! | Year | Design/Drafting and Computer Aided Design | 1 | | | | ! |
| ! | ! | ! | ! | Semester/Term | Computers and Technology/Computer Media | .5 | ! | ! | | |
| | | ! | ! | Year | Aerospace Engineering (PLTW) | 1 | | | ! | |
| | | ! | ! | Year | Computer Integrated Manufacturing (PLTW) | 1 | ! | | | |
| | | ! | ! | Year | Engineering Design and Development | 1 | | | ! | |
| ! | ! | ! | ! | Semester/Term | Introduction to Woodworking (WoodLINKS) | .5 | ! | ! | ! | ! |
| ! | ! | ! | ! | Semester/Term | Furniture and Cabinetry (WoodLINKS) | .5 | ! | ! | ! | ! |
| | ! | ! | ! | Semester/Term | Advanced Furniture and Cabinetry (WoodLINKS) | .5 | ! | ! | ! | ! |
| | | ! | ! | Year/Semester | Fine Woodworking (WoodLINKS) | 1 | ! | ! | ! | ! |
| ! | ! | ! | ! | Semester/Term | Home Maintenance & Improvement (WoodLINKS) | 1 | ! | ! | ! | ! |
| | ! | ! | ! | Year/Semester | Introduction to Construction (WoodLINKS) | 1 | ! | ! | | |
| ! | ! | ! | ! | Semester | Metals Manufacturing 1 | .5 | ! | | | |
| ! | ! | ! | ! | Semester | Metals Manufacturing 2 | .5 | ! | | | |
| | ! | ! | ! | Semester | Metals Manufacturing 3 | .5 | ! | | | |
| | ! | ! | ! | Year | Materials Science | 1 | | | | ! |

Appendix C

Course Descriptions by School

Madison East High School



Program of Studies
2010-2011

Business, Marketing, & Computers

2010-11

| Course Name | Semesters Offered | Course Number | Grade Levels | | | |
|--|-------------------|---------------|--------------|----|----|----|
| | | | 09 | 10 | 11 | 12 |
| Computer Applications | Sem 1 or 2 | BUS 100 | x | x | x | x |
| Marketing | Sem 1 and 2 | BUS 121/122 | x | x | x | x |
| Personal Finance | Sem 1 | BUS 210 | | x | x | x |
| Business Law | Sem 1 | BUS 220 | | x | x | x |
| Accounting | Sem 1 and 2 | BUS 241/242 | | x | x | x |
| Starting Your Own Business | Sem 2 | BUS 301 | | | x | x |
| Accounting for Dual Transcribed Credit | Sem 1 and 2 | BUS 303/304 | | | x | x |

Computer Applications

BUS 100 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12

Some keyboarding experience is recommended.

Meets recommendation: CTE

Learn how to create pictures, sounds, and animation in graphic presentations. Do you know how to create a flyer, a brochure, a business card, or a menu? Learn skills that are often required in business and as a student on college campuses today. Computer Applications is a course designed to teach students how to use the computer as a business and personal tool through the use of applications software. These include spreadsheets, database, word processing, desktop publishing, and Powerpoint applications, as well as the Internet. Objectives for the course include performing activities using integrated software programs. Units of study include: Advanced word processing; introduction to spreadsheets, database and power point; basic PC maintenance; peripherals (scanner, digital camera, etc) will be used.

Marketing

BUS 121/122 1.0 credit Semester 1 and 2 Grade: 9, 10, 11, 12

No prerequisites.

Meets recommendation: CTE

Introduce yourself to the exciting world of marketing! You will learn how products are brought from the idea stage to how they become available on store shelves. Everything from distribution to sales will be explored. You will create new products and learn how to market them efficiently. The course includes fun activities like developing newspaper ad layouts, creating displays, and analyzing television and radio ads. This hands-on course will provide the basis for a career in marketing. Students at La Follette, West, and East who are enrolled in this class can also be members of the DECA Chapter at their school, while students at Memorial can join FBLA. Note: At LaFollette and West, Marketing is split into two semester long classes that can be taken in sequence or separately. The two courses are "Marketing and Sales" and "Advertising and Display." At Memorial and East, Marketing is a year-long course.

Personal Finance

BUS 210 .5 credit Semester 1 Grade: 10, 11, 12

No prerequisites.

Meets recommendation: CTE

Do you know how to manage a checking account? Do you know how to get a car loan? How about applying for that student loan? How old do you need to be to get a credit card? How does someone make a budget? What are stocks? This course will answer these questions and more. It will attempt to answer: how can I keep up with the rising cost of living? And, what is a wise and what is an unwise buying decision? Through lectures, discussions, simulations, and activities students will gain an insight as to how money makes the world go round. Units of study include: budgeting, savings, investing, credit, banks and banking systems, renting/buying a home, insurance, and basic business skills.

Business Law

BUS 220 .5 credit Semester 1 Grade: 10, 11, 12

No prerequisites.

Meets recommendation: CTE

Students who enjoy learning about trials, discussing the impact of current events on law and want to know more about their rights as individuals should take this class. Students will participate in a variety of interactive and

practical activities, such as in class mock trials, case studies, interpreting contracts, Internet activities, a field trip and guest speakers as part of the process of learning how law, specifically business law, impacts society.

Accounting 1

BUS 241/242

1.0 credit

Semester 1 and 2

Grade: 10, 11, 12

No prerequisites.

Meets recommendation: CTE

This year long course is an introduction to the world of accounting. This is a must-have for any student interested in pursuing any business related major or for students who want to start their own business. Every business in our society is impacted by accounting based decisions. In this course you will have the opportunity to use real-world accounting software, source documents, financial statements and multimedia to prepare and analyze business transactions. A Wisconsin state-sponsored Youth Apprenticeship program is available in the area of finance.

Starting Your Own Business

BUS 301

.5 credit

Semester 2

Grade: 11, 12

No prerequisites.

Meets recommendation: CTE

Students will prepare a BUSINESS PLAN and present it to a banker.

Personal finance is one of the most useful classes a high school student can take in order to prepare for their future. This one-semester class will teach students: how to prepare themselves for the job market, how taxes impact their lives, how to create and use a budget, how to build wealth, the pros and cons of home ownership versus renting, how credit can be both your best friend and your worst enemy, how financial institutions work, and about the different types of insurance. Students will also learn about investing in stocks, bonds, and mutual funds, as well as how to save money and why it is important to save money. Don't be left at a disadvantage in life due to a lack of basic financial knowledge. A Wisconsin state sponsored Youth Apprenticeship program is available in the area of finance. You may also see your building internship coordinator for potential career employment opportunities. ALL STUDENTS WILL PARTICIPATE AT NO COST IN THE National Financial Literacy Challenge, an initiative recommended by the President's Advisory Council on Financial Literacy.

Accounting for Dual Transcribed Credit

BUS 303/304

1.0 credit

Semester 1 and 2

Grade: 11, 12

Signature of Instructor required.

Meets recommendation: CTE

This course is designed to help you understand basic accounting principles and procedures. Objectives include preparation for: (1) an accounting career or any business-related field and (2) using accounting in your everyday life. Major concepts include: recording perpetual business transactions, determining a business profit or loss, preparing financial reports and budgets, and analyzing financial statements for personal and business decisions. Students enrolled in this course will be eligible to receive college transcribed credit pending an MMSD and a Wisconsin technical college annually reaching and fulfilling an agreement on course curriculum, teacher requirements, textbooks, etc. Students will generally know in the first quarter whether transcribed credit is planned to be available for students with a B or better in the course. A Wisconsin state-sponsored Youth Apprenticeship program is available in the area of finance.

Family & Consumer Sciences

2010-11

| Course Name | Semesters Offered | Course Number | Grade Levels | | | |
|---|-------------------|---------------|--------------|----|----|----|
| | | | 09 | 10 | 11 | 12 |
| Clothing Construction & Careers | Sem 1 or 2 | FCS 100 | x | x | x | x |
| Interior Design & Entrepreneurship (offered 2011-12) | Sem 1 or 2 | FCS 110 | x | x | x | x |
| PEP Leadership 1 | Sem 1 | FCS 121 | x | x | x | x |
| Culinary Basics | Sem 1 or 2 | FCS 130 | x | x | x | x |
| Child Development 1 | Sem 1 | FCS 211 | | x | x | x |
| Child Development 2 | Sem 2 | FCS 212 | | x | x | x |
| Introduction to Health Science Occupations | Sem 1 or 2 | FCS 230 | | x | x | x |
| Health Information Office Assistant (offered 2011-12) | Sem 1 or 2 | FCS 240 | | x | x | x |
| Nursing Assistant | Sem 1 or 2 | FCS 250 | | x | x | x |
| Health Science Occupations 2 | Sem 1 or 2 | FCS 260 | | x | x | x |
| Gourmet Chef 1 Prostart | Sem 1 or 2 | FCS 270 | | x | x | x |
| International Cuisine | Sem 1 or 2 | FCS 280 | | x | x | x |
| Human Sexuality | Sem 1 | FCS 301 | | | x | x |
| PEP (Peers Education Peers) | Sem 1 or 2 | FCS 310 | | | x | x |
| AS Careers with Children | Sem 2 | FCS 352 | | | x | x |
| Gourmet Chef 2 Prostart | Sem 1 or 2 | FCS 370 | | | x | x |
| Career Internship | Sem 1 or 2 | FCS 380 | | | x | x |
| Independent Living | Sem 1 or 2 | FCS 400 | | | | x |

Clothing Construction & Careers

FCS 100 .5 credit

Semester 1 or 2

Grade: 9, 10, 11, 12

No prerequisites.

Meets Recommendation: CTE

Non-sewers and all levels of sewing ability welcome.

Lab fee: \$20. Students may also wish to purchase project materials during our fabric store fieldtrip.

Students will learn to use a sewing machine and pattern to plan and complete garments which fit into their personal wardrobe while applying their skills and knowledge to the world of work. Clothing construction, repair, re-design and consumer skills are emphasized. A variety of career options in the clothing and fashion industries are explored. Each student will complete at least one machine sewing project using a pattern and construction skills. Advanced students may work ahead on new skills independently. Units of study include: fabrics and their care, line and design, color, pattern selection, clothing construction, and careers.

Interior Design & Entrepreneurship

FCS 110 .5 credit

Semester 1 or 2

Grade: 9, 10, 11, 12

No prerequisites.

Meets Recommendation: CTE

This course is only offered every other year.

Students must purchase their own project materials.

This course is open to both males and females interested in design—whether it's studying housing, interior design, or creative hand crafts for the home. The only prerequisite is an interest in trying new things! Are you a creative person? Looking for an opportunity to try new crafts and explore the possibility of entrepreneurship in your future? This class is for you! This course will provide you an opportunity to study how environments affect people and what factors influence your choices. Learn ways to select and beautify your surroundings and save money while having fun. Units of study include: design experiences in architecture, furniture arrangement, color selection, weaving techniques, needlework, fabric dyeing, floral arrangement, etc.

PEP Leadership 1

FCS 121 .5 credit

Semester 1

Grade: 9, 10, 11, 12

Prerequisite: Signature of instructor. A designated middle school person will recommend 8th grade students to liaison person at the high school. (call with questions: Natalie Aguirre 204-1524):

PEP Leadership 1 is to prepare students for leadership roles in schools, the community and as future teachers. A main component of the class will be a "hands-on" tutoring/mentoring program at feeder elementary schools. This team-taught class uses cooperative experiences to facilitate interactive learning. Units of Study include: The class will focus on leadership, education, race issues, choices and impacting

Culinary Basics

FCS 130 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Lab fee: \$20. Meets Recommendation: CTE
No prerequisites.

This is the first in a recommended series of foods classes focusing on the basics of food preparation and nutrition. Students will have the privilege of a kitchen laboratory experience approximately once per week as they "eat their way around the food pyramid." Designed for those who want to take higher level courses as well as those who love to cook. This course prepares you for International Cuisine or Gourmet Chef 1 ProStart. Units of Study include: The importance of food, nutrition, eating disorders, food safety, kitchen safety, cooking equipment, cooking terms, reading a recipe, table manners, menu planning, quick breads, yeast breads, vegetables, fruits, dairy products, eggs, meat/poultry, bakeshop: cookies, tarts.

Child Development 1

FCS 211 .5 credit Semester 1 Grade: 10, 11, 12
No prerequisites. Meets Recommendation: CTE

Students must have a clean background check to participate in the Preschool or volunteer in a daycare center (Per caregiver law HFS 12).

This class should be a requirement to graduate for all males and females. If your future career includes teaching this is a prerequisite course. What do you know about children and their development from conception through their first year of life? Why are the first three years of a child's life the most important years? What does it take to be a good parent? Students in class learn what it's like to be a parent for 48 hours as they care for the simulated "Baby Think It Over" Doll. Childcare skills are taught as students plan and operate a 4-week preschool right here at East. Units of study include: prenatal influences before birth, pregnancy, brain development, infant care during the first year of life, social and emotional development of children, preschool preparation and participation.

Child Development 2

FCS 212 .5 credit Semester 2 Grade: 10, 11, 12
No prerequisites. Meets Recommendation: CTE

Students must have a clean background check to participate in the Preschool or volunteer in a daycare center (Per caregiver law HFS 12).

What is the difference between punishment and discipline? When does discipline become "abusive"? What does effective discipline look and sound like? How does one handle common behavior issues like temper tantrums, sibling rivalry, and toilet training? What do we know about the way children learn best? Students are provided with an opportunity to improve their understanding of childcare skills through a hands-on Preschool simulation right here at East. This is excellent "teacher training" for students interested in teaching as a career choice. Units of study include: effective parenting, working with special needs children, crises and child, nutrition and children, children's literature, health and safety, and preschool preparation and operation.

Introduction to Health Science Occupations

FCS 230 .5 credit Semester 1 or 2 Grade: 10, 11, 12
Participation in YHSC or HOSA club is recommended. Meets Recommendation: CTE
No prerequisites.

Get a jump start on a career in the rapidly growing health care industry. Many describe this introductory course as a "make or break" in their decision to go into health care before investing in college tuition. Learn to use basic medical equipment while exploring the many career opportunities in health care. In this interdisciplinary course students will become familiar with medical terminology, body systems, and legal and ethical health care issues. This course is a prerequisite for the Certified Nursing Assistant course. Students are also invited to participate in Health Occupation Students of America (HOSA) Club which sponsors community service and competitive state and

national events or the Youth Health Service Corp (YHSC) which links students to healthcare-based service learning and community service opportunities. Units of study include: Core information such as medical terminology, basic physiology and anatomy, and technology related to all aspects of health care.

Health Information Office Assistant

FCS 240 .5 credit Semester 1 or 2 Grade: 10, 11, 12

This course is only offered every other year.

Meets Recommendation: CTE

Participation in HOSA (Health Occupations Students of America) club is recommended.

Perfect for those interested in the field of medicine but uncomfortable with direct patient contact. Successful completion of this course will prepare a student for entry-level positions in a variety of medical offices. Whether you work for a clinic, hospital, chiropractor, rehabilitation center, optometrist, podiatrist, nursing home, insurance company, or private billing services – you’ll have a career you can be proud of! Medical office assistants enjoy exciting, varied assignments, steady work schedules, respect and prestige. These skills are also transferable to a variety of non-medical office careers. Units of study include: office procedures, customer service, communication, medical terminology, privacy rights, computer skills and health care insurance.

Nursing Assistant*

FCS 250 .75 credit Semester 1 or 2 Grade: 10, 11, 12

Lab fee \$25.00.

Meets Recommendation: CTE

*Prerequisite: * Successful completion of Intro to Health Science Occupations (FCS 230) or instructor signature required. This course is recommended for students 16 years old and above. (Contact Dottie Winger with questions, 204-1666 or dwinger@madison.k12.wi.us).*

This course is team taught by a vocationally certified teacher and a registered nurse. Students learn and apply care giving skills in lab and professional settings. Students seeking employment in any health care field will find this a valuable first step! Nursing Assistant is a Prerequisite to all Wisconsin Technical College System nursing programs and highly regarded in 4-year college admissions. Units of study and skills include: human development, infection control, patient transfer, body in health and disease, personal care and hygiene, nutrition, and special care.

* To meet certification requirements, students must complete clinical experiences in a local health care agency arranged by the teacher, maintain a grade of 75% or better, and meet attendance requirements. The school is not responsible for transportation. A medical checkup, TB skin tests, successful background check and \$115 certification test fee are required. Class meets for additional hours of lab and clinical time on weekends, evenings, and/or breaks.

Health Science Occupations 2

FCS 260 .5 credit Semester 1 or 2 Grade: 10, 11, 12

Lab fee \$25.00

Meets Recommendation: CTE

Prerequisite: Successful completion of Health Science Occupations (FCS 230) or signature of instructor required (Contact Dottie Winger with questions, 204-1666 or dwinger@madison.k12.wi.us).

This course teaches caregiver skills, but does not require additional clinical or lab time and does not result in CNA certification. You **do not need this course if you are taking Nursing Assistant (FCS 250) as it covers the same content.*

If you find satisfaction in helping others, this course is for you! This course provides excellent caring skills for family life and good preparation for health care skills used in physical therapy and hands-on patient care careers. If you’d like to learn the nursing assistant skills, but don’t need the certification for nursing school or a job, then this is the non-certification option. Units of study include: labs to practice skills in patient transfer, vital signs, records, charting, and assisting with activities of daily living.

Gourmet Chef 1 Prostart

FCS270 .5 credit Semester 1 or 2 Grade: 10, 11, 12

Lab fee \$20.00.

Meets Recommendation: CTE

Prerequisite: Culinary Basics (or Junior/Senior)

This class focuses on beginning food service and more advanced food preparation techniques. Students will have several restaurant and catering activities throughout the semester – they will be in the kitchens 1-3 times/week. If

you are interested in food service or love to cook, this is the class for you! This course is the prerequisite for students enrolling in Gourmet Chef 2 Prostart. Units of study include: Customer relations, knife skills and techniques, safety and sanitation in the workplace, equipment use, breakfast foods (eggs, breads, meats), fruits, vegetables, garnishing, cold platter deli tray, salads, cookies, sandwiches.

International Cuisine

FCS 280 .5 credit Semester 1 or 2 Grade: 10, 11, 12
 Lab fee: \$20. Meets Recommendation: CTE

Prerequisite: Culinary Basics or senior (or Culinary Arts 1 in 2008 or 2009)

Sample food and culture around the world, cooking American regional and world cuisine. Explore geographical regions of the US (Northwest, Southwest, New England, Midwest, Pennsylvania, and the South) and the world (Mexico and Latin America, France, Italy, Greece, Japan, China, India and Africa).

Human Sexuality

FCS 301 .5 credit Semester 1 Grade: 11, 12

No prerequisites.

This course takes a mature look at the many aspects surrounding relationships and sexuality. This class will surely lessen one's chances of ending up in an "unhealthy" relationship. Students taking this course should be willing to participate in a discussion based format. Units of study include: Understanding ourselves, communication skills, decision-making skills, identifying what "love" really feels like, dating dos and don'ts, signs of unhealthy relationships, pregnancy & STD awareness and prevention, and the secure benefits of practicing abstinence.

PEP (Peers Educating Peers)

FCS 310 .5 credit Semester 1 or 2 Grade: 11, 12
Prerequisite: Signature of instructor. Meets Recommendation: CTE

Recommendations by staff member, administrator or former PEP student are made to Mrs. Aguirre. (Call with questions: Natalie Aguirre 204-1524)

It is a privilege to be part of this class. The first nine weeks involves training in valuable communication and leadership skills to become a trained "peer educator". The second nine weeks you will go to middle schools and "teach" middle school students about the importance of feeling good about self and how to deal with peer pressure as it relates to drugs and alcohol and other teen issues. Students interested in a teaching career are encouraged to apply for a recommendation to take PEP. Units of Study include: Getting to know you, Day-Away, adolescent development, communication and leadership training, designing lessons to be taught to feeder middle schools

AS Careers with Children

FCS 352 .5 credit Semester 2 Grade: 11, 12
Prerequisite: Child Development 1 or 2. Meets Recommendation: CTE

Students must have a clean background check to participate in the Preschool or volunteer in a daycare center (Per caregiver law HFS 12).

Does your future career involve children? Successful completion of this course allows you to become certified as an assistant child care teacher through the Department of Public Instruction. (If you took this course at MATC it would cost you \$400.00.) This course will offer you valuable insights and skills you need to be successful in understanding and working with children. Students will prepare for and operate East's very own preschool. Upon completion of this course students will meet the criteria to work as an assistant child care teacher in a Wisconsin licensed childcare program. Child Development 1 or 2 is required first! Units of study include: introduction of childcare services, effective interaction with children, classroom safety, meals and snacks, classroom activities and environment, working through stress in families, and child abuse and neglect.

Gourmet Chef 2 Prostart

FCS 370 .5 credit Semester 1 or 2 Grade: 11, 12
 Lab fee \$20.00. Meets Recommendation: CTE

Prerequisite: Gourmet Chef 1 Prostart (or Culinary Arts 1 in 2008 or 2009)

Students who have a special interest and talent for the culinary arts are encouraged to enroll. Interest in attending college/tech school in the culinary field are a bonus but not required. Students will have several restaurant and catering activities throughout the semester – they will be in the kitchens 1-3 times/week. There will be opportunity to be part of the annual state-wide Prostart Culinary Competition. Units of Study include: History of food service, menu planning, purchasing, customer service, mock restaurant experience, potatoes, pasta (noodles and sauce), rice, yeast breads, cake decorating, pastry/pie, cooked and frozen desserts, meat, seafood, poultry, soups and sauces.

Career Internship

FCS 380 1.0 credit Semester 1 or 2 Grade: 11, 12

Prerequisite: Students must complete a program application and interview. Meets Recommendation: CTE

(Contact Dottie Winger for application or information, 204-1666 or dwinger@madison.k12.wi.us).

Class requires students to arrange transportation and maintain employment for an additional 180 hours (This is why a semester course earns 1 credit**). Some job placements will require a Health history without restrictions, Confidentiality training, and a Clean background check (Per caregiver law HFS 12).*

GET PAID, RECEIVE CREDIT AND GAIN EXPERIENCE. Learn while you earn by linking your classroom knowledge to paid employment in a work environment in the Madison area. Build decision making and leadership skills while applying classroom knowledge in a real work setting. You may be employed in areas relating to Bio-technology, Health Information, Business Support Services, Technology, Marketing, Merchandising, Child Care and Food Service to name a few. These are employment opportunities students would have difficulty securing on their own. At the completion of the course portfolio and 180 on-the-job-hours, you will be awarded a State Certified Employability Skills Certificate. A great resume enhancer and conversation piece during your next job interview. Units of study include: Understanding organizations, Reaching your career goals, Communication and documentation in the work setting, Networking and Self-advocacy.

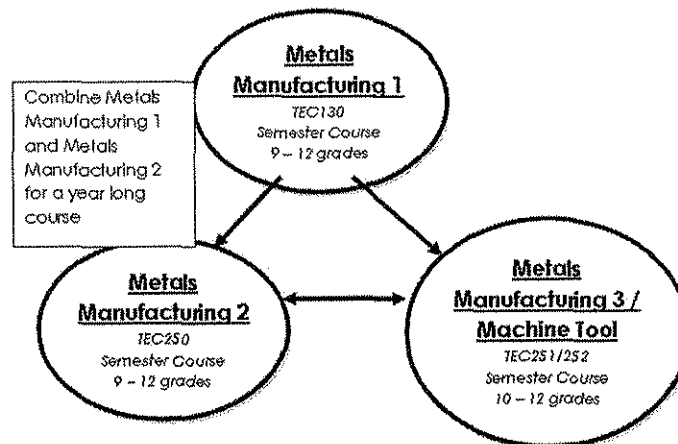
Independent Living

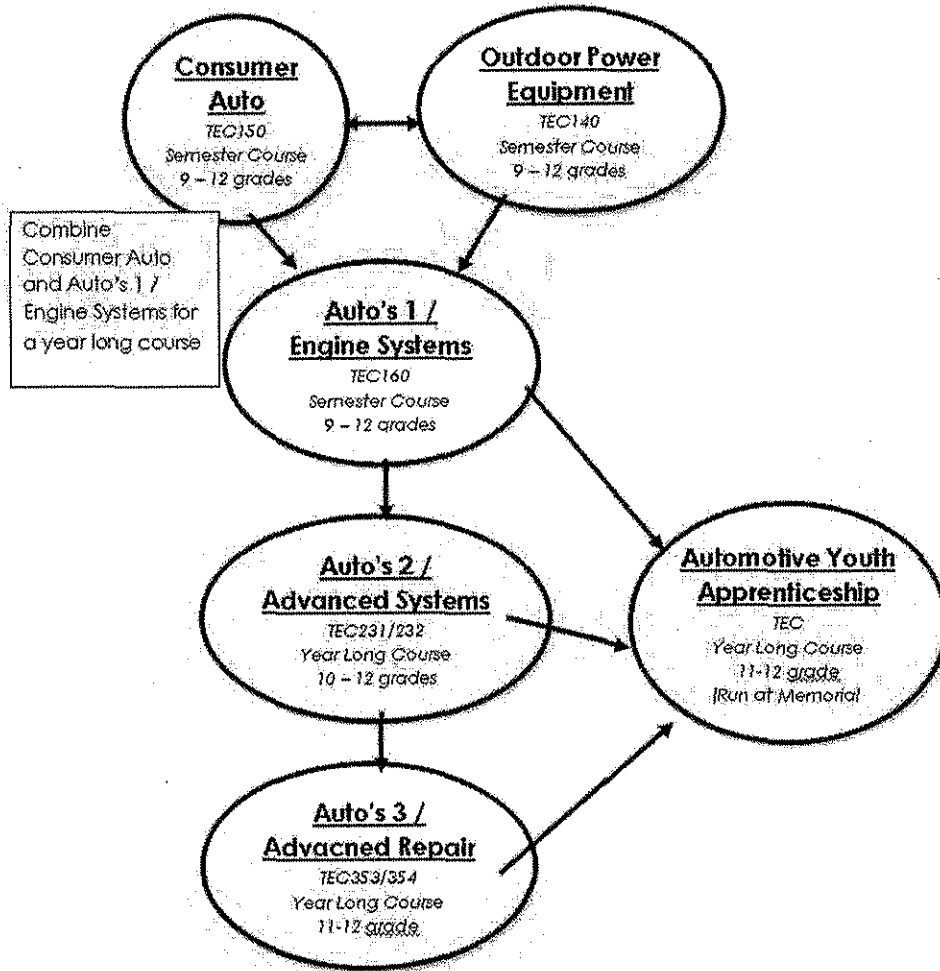
FCS 400 .5 credit Semester 1 or 2 Grade: 12

This class is a must for any senior who wants to prepare themselves for the real world! Independent Living will help you develop the life skills needed to survive on your own. This exciting course offers guest speakers and field trips into the community. Units of study include: money management, budgeting, credit/loans, credit cards, checking accounts, basic nutrition and food preparation, car buying, renting an apartment, STD's and HIV awareness, birth control, and clothing care and repair.

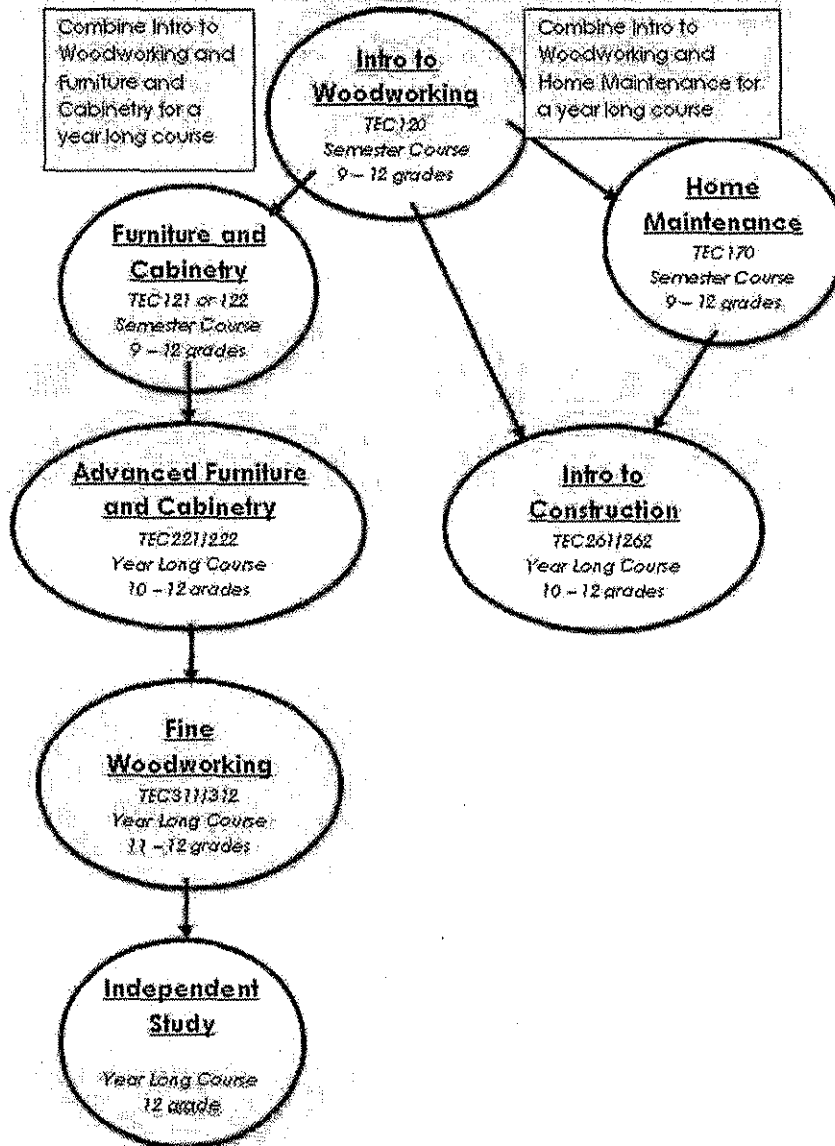
| Course Name | Semesters Offered | Course Number | Grade Levels | | | |
|---|-------------------|----------------|--------------|----|----|----|
| | | | 09 | 10 | 11 | 12 |
| Computer Media in Technology | Sem 1 or 2 | TEC 100 | x | x | x | x |
| Introduction to Graphic Design | Sem 1 or 2 | TEC 110 | x | x | x | x |
| Introduction to Woodworking (Wood LINKS) | Sem 1 or 2 | TEC 120 | x | x | x | x |
| Furniture and Cabinetry (Wood LINKS) | Sem 1 or 2 | TEC 121/122 | x | x | x | x |
| Metals Manufacturing 1 | Sem 1 or 2 | TEC 130 | x | x | x | x |
| Outdoor Power Equipment Technology | Sem 1 or 2 | TEC 140 | x | x | x | x |
| Consumer Auto | Sem 1 or 2 | TEC 150 | x | x | x | x |
| Auto Technology 1/Engine Systems | Sem 1 or 2 | TEC 160 | x | x | x | x |
| Home Maintenance & Improvement (Wood LINKS) | Sem 1 or 2 | TEC 170 | x | x | x | x |
| Introduction to Engineering (Project Lead the Way) | Sem 1 and 2 | TEC 171/172 | x | x | x | x |
| Web Design 1 | Sem 1 or 2 | TEC 180 | x | x | x | x |
| Advanced Web Design | Sem 1 or 2 | TEC 190 | x | x | x | x |
| Graphic Design 2 – Yearbook Publication | Sem 1 and 2 | TEC 201/202 | | x | x | x |
| Design Drafting – CAD Architecture | Sem 1 or 2 | TEC 210 | | x | x | x |
| Advanced Furniture and Cabinetry (Wood LINKS) | Sem 1 and 2 | TEC 221/222 | | x | x | x |
| Auto Technology 2 | Sem 1 and 2 | TEC 231/232 | | x | x | x |
| Metals Manufacturing 2 | Sem 1 or 2 | TEC 250 | | x | x | x |
| AS Metals Manufacturing – Machine Tooling | Sem 1 or 2 | TEC 251/252 | | x | x | x |
| Digital Electronics (Project Lead the Way) | Sem 1 and 2 | TEC 255/256 | | x | x | x |
| Introduction to Construction (Wood LINKS) | Sem 1 and 2 | TEC 261/262 | | x | x | x |
| Principles of Engineering (Project Lead the Way) | Sem 1 and 2 | TEC 271/272 | | x | x | x |
| Introduction to Film and Video Production | Sem 1 or 2 | TEC 280 | | x | x | x |
| Advanced Video and Film Production | Sem 1 or 2 | TEC 301/302 | | | x | x |
| Fine Woodworking (Wood LINKS) | Sem 1 and 2 | TEC 311/312 | | | x | x |
| Computer Integrated Manufacturing (Project Lead the Way) | Sem 1 and 2 | TEC 321/322 | | | x | x |
| Automotive Technology 3 | Sem 1 and 2 | TEC 353/354 | | | x | x |
| Aerospace Engineering (Project Lead the Way) | Sem 1 and 2 | Memorial | | x | x | x |
| Civil Engineering and Architecture (Project Lead the Way) | Sem 1 and 2 | Mem/LaFollette | | x | x | x |
| Engineering Design and Development (Project Lead the Way) | Sem 1 and 2 | Memorial | | x | x | x |
| Automotive Technology 4/Advanced Engines | Sem 1 and 2 | Mem/LaFollette | | | x | x |
| Automotive Youth Apprenticeship Program | Sem 1 and 2 | Memorial | | | x | x |

Metals / Manufacturing Course Sequence



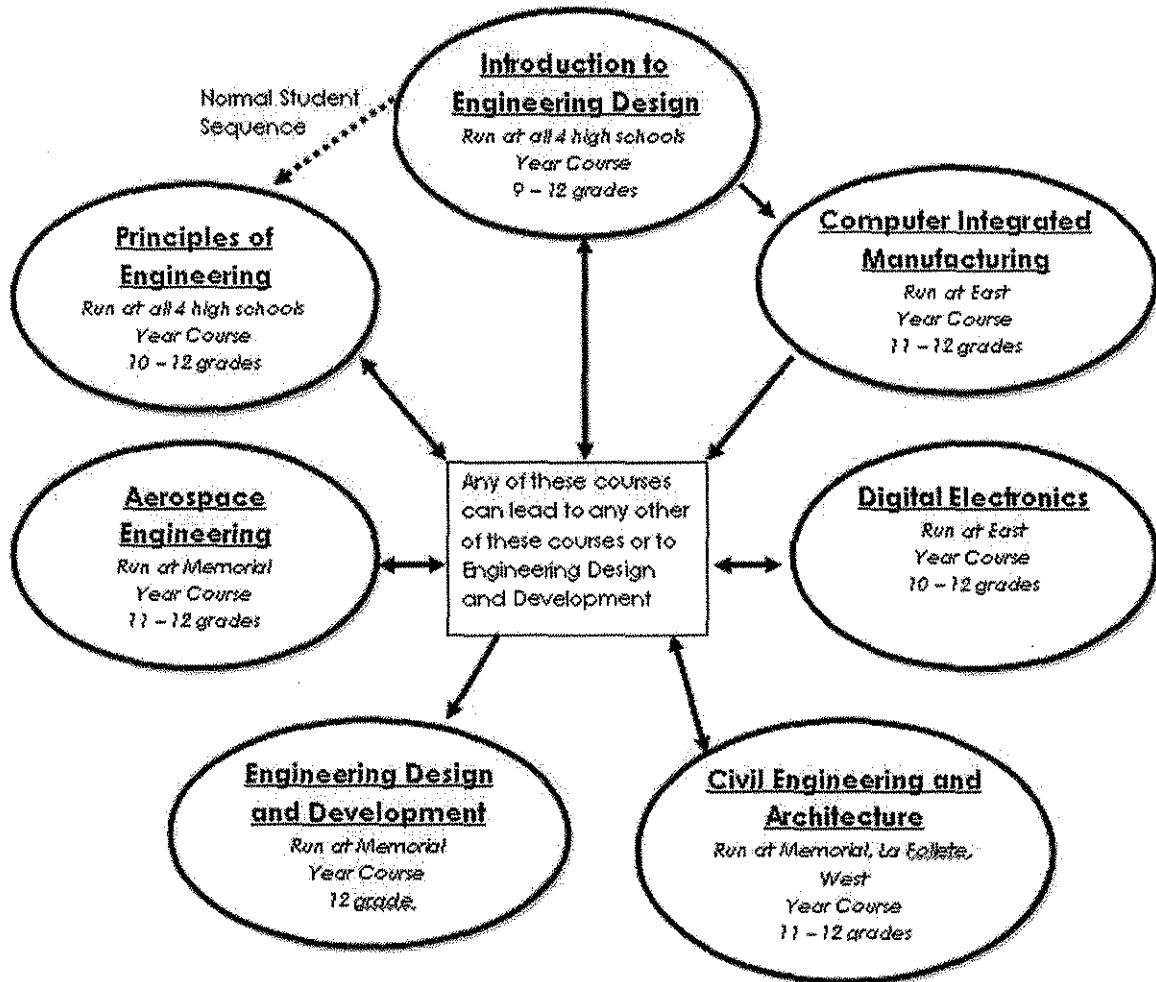


Woodworking and Construction Course Sequence

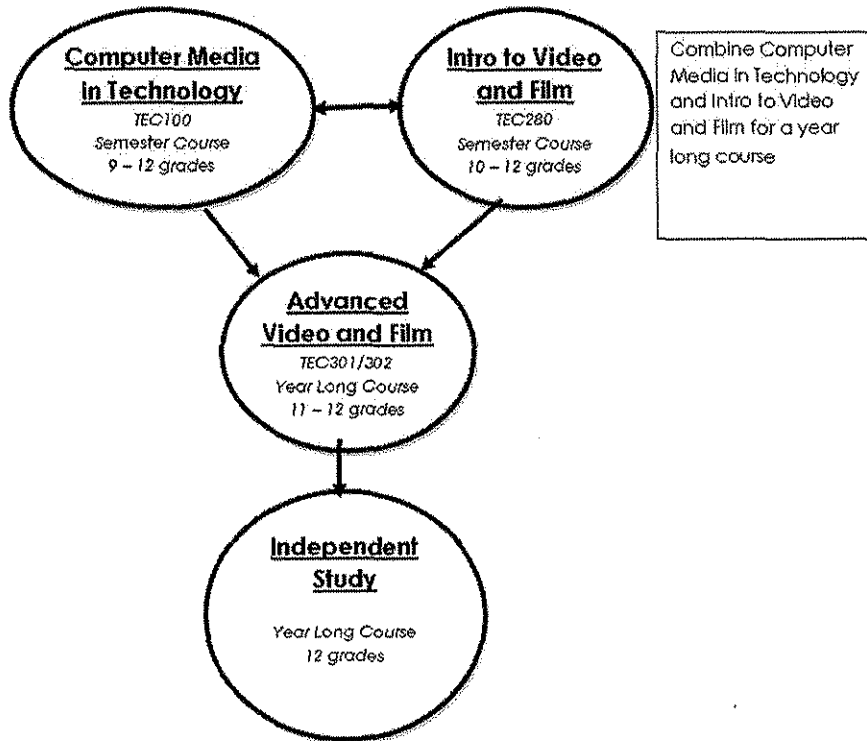


Engineering (Project Lead The Way) Course Sequence

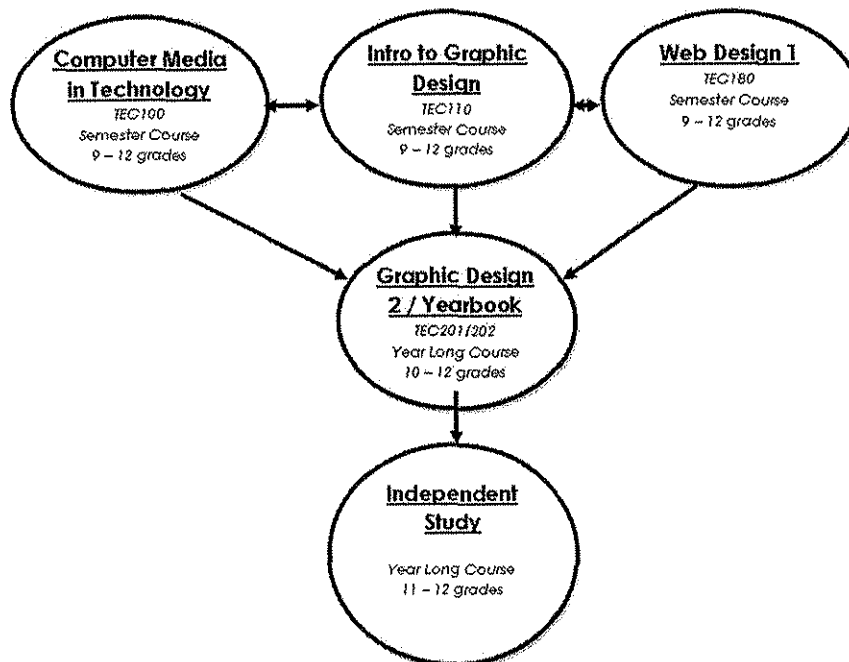
Although it is not required for students to take the Introduction to Engineering Design course to take any other engineering course (except Computer Integrated Manufacturing), it is strongly recommended.



Video Course Sequence



Graphic Design Course Sequence



Computer Media in Technology

TEC 100 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00 Meets recommendation: CTE
No prerequisites.

This is a general course about Computer Multimedia. Students will burn music CD's, make CD labels, take color photographs, print color photographs, use Desktop Publishing, make animations, make movies on the computer as a group, and make Websites with animation and sound. You will be introduced to taking photographs with a digital camera, and use will desktop publishing. We will modify sound files, burn music onto CDs, and make CD labels for them.. You will create websites with animation, sound, and video. You may choose to do an architectural design or create an invention using 3D software. Create an animation or video game. You will learn procedures for internet research and safer ways to use E-mail and the internet. Some of the time you will work in small groups. Because of the collaborative nature of this course, it is required that you be able to work well with others.

Introduction to Graphic Design

TEC 110 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00 Meets recommendation: CTE
No prerequisites.

This course provides an overview of computer applications used in the field of Graphic Design. Computer applications include Adobe Photoshop, Adobe Illustrator, and Adobe InDesign. Students will also explore digital photography and have the opportunity to produce images for the school's yearbook. Those who have a designer to take part in Graphic Design 2 / Yearbook Publications need to take this course.

Introduction to Woodworking (WoodLINKS)

TEC 120 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00 Meets recommendation: CTE
No prerequisites.

In this hands-on course you learn modern woodworking skills as you build useful projects. The curriculum focuses on standard procedures, properties of wood, accurate measurement, and the safe use of hand and power tools used for woodworking. At the end of the semester, successful students take home attractive projects and many new skills. This course is part of the district's new initiative focusing on industry training in wood products manufacturing, known as WoodLINKS. Student is responsible for obligations. Units of study include: basic hand, machine, and communication skills in woodworking.

Furniture and Cabinetry (WoodLINKS)

TEC 121/122 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Prerequisite: Introduction to Woodworking. Meets recommendation: CTE
Successful completion of work in this class will advance the student to the Journeyman certificate issued by the Skills USA/VICA executive council. Class fee \$20.00.

This course is a continuation of Introduction to Woodworking. Students will learn more advanced skills related to cabinet making and architectural woodworking. Areas of study include: safety, wood material technology, woodworking design, project planning, operations on woodworking machines, finishing methods and techniques, industry standards, and customizing. Students will also explore career opportunities and ways woodworking applies to our lives. Students will work independently or in groups to complete at least one major project. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing, known as WoodLINKS. Student is responsible for obligations.

Metals Manufacturing 1

TEC 130 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00 Meets recommendation: CTE
No prerequisites.

This course is designed to acquaint students with hot and cold processes for manufacturing products with metal. Projects are completed in the areas of metal cutting, sheet metal-bending and construction, threading-interior and

exterior, welding—spot, arc, and oxyacetylene. Metals Manufacturing 2 and 3 are Semester classes. Students may elect to take either course or a combination of the two. Units of study include: basic metals processes.

Outdoor Power Equipment Technology

TEC 140 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00. Meets recommendation: CTE
No prerequisites.

Students in class will study the theory and operation of two-and four-stroke engines. They will gain hands-on experience by disassembling, analyzing, and reassembling small engines. Students will be encouraged to bring in projects needing repair from home. This course integrates and reinforces basic science and mathematical concepts while providing hands-on experience for students. Student is responsible for obligations.

Consumer Auto

TEC 150 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00. Meets recommendation: CTE
No prerequisites.

This course is designed for the students who would like to own and maintain a personal vehicle. This course covers basic car care, under hood inspection (fluids, belts, hoses), removing & replacing items (wiper blades, bulbs, fuses), cooling system maintenance, battery/charging system diagnosis, lubrication system maintenance, tire information, brake inspection, minor ignition system maintenance (spark plug, wires, firing order), car buying, car insurance, and service information. Student is responsible for obligations.

Auto Technology 1/Engine Systems

TEC 160 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00. Meets recommendation: CTE
Prerequisite: Completion of Consumer Auto or Outdoor Power Equipment Technology with a passing grade.

Automotive Technology 1 is an introduction to basic engine construction and operation. Students will disassemble an engine to study engine components operation, testing procedures, and engine trouble diagnosis. Students will complete activities to study the following automotive engine systems: cooling, lubrication, fuel, electrical, and ignition systems. Student is responsible for obligations. Units of study include: basic car care, basic cooling system, and basic scan tool use.

Home Maintenance & Improvement (WoodLINKS)

TEC 170 .5 credit Semester 1 or 2 Grade: 9, 10, 11, 12
Semester class fee \$20.00. Meets recommendation: CTE
No prerequisites.

This course aims to provide students with knowledge of techniques used in maintaining a home. Emphasis is placed on residential construction and the related trade areas. Students will learn about the related power and hand tools of the building industry with assigned work units. Students will gain hands-on experience with fixing a leak in a copper pipe, patching a hole in a wall, wiring up a switch or an outlet, what to do when fuses don't work, and unplugging a drain. Safety practices and procedures are discussed, demonstrated, and practiced. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing, know as WoodLINKS. Student is responsible for obligations.

Introduction to Engineering (Project Lead the Way)

TEC 171/172 1.0 credit Semester 1 and 2 Grade: 9, 10, 11, 12
Class fee \$40.00. Meets recommendation: CTE

Minimum of successful completion of Algebra recommended or currently enrolled. This course is part of the new district initiative in Engineering known as, Project Lead the Way. It is possible for students to take the complete engineering sequence, (TEC 171/172, TEC 255/256, TEC 271/272 and TEC 321/322) but it is not required.

This course introduces students to the design process and the tools used in product development. Students will experience first-hand the activities in which engineers engage throughout the design cycle. Development of design briefs, sketching, 3D solid modeling, and prototyping through computer-aided drafting are part of the course.

Students will have the opportunity to learn ways in which design techniques apply to many fields, such as healthcare, business, art and animation, manufacturing, engineering, etc. Problem-solving and math as it applies to producing products and services for today's society are emphasized. This course is part of the new district initiative in Engineering known as, Project Lead the Way. *College credit available.*

Web Design 1

TEC 180

.5 credit

Semester 1 or 2

Grade: 9, 10, 11, 12

*Class fee \$20.00.**Meets recommendation: CTE**No prerequisites.*

The primary emphasis of this course is the design and construction of web pages. Students will learn the basics of web design theory and understand beginning HTML source code. Students will design websites using current industry standard software. In addition, students will work with digital video and still photography and associated editing software. Units of study include: Adobe Illustrator, Photoshop, Dreamweaver, InDesign, Digital Photography.

Advanced Web Design

TEC 190

.5 credit

Semester 1 or 2

Grade: 9, 10, 11, 12

*Prerequisite: Web Design 1**Meets recommendation: CTE**Class fee \$20.00*

This course will specialize in designing advanced web pages. Use of video and animation in websites will be emphasized. Students will have the chance to work with other groups throughout the school to produce web pages that may appear on the school's website. Students will also work with area businesses to design web pages. Students will work with Dreamweaver and Flash 8 software.

Graphic Design 2 – Yearbook/Publications

TEC 201/202

1.0 credit

Semester 1 and 2

Grade: 10, 11, 12

*Meets recommendation: CTE**Prerequisite: Completion of Introduction to Graphic Design or completion of (or current enrollment in) Journalism.*

Students will take leadership roles in the design of the East Yearbook, "Tower Tales," as well as East's newspaper, "Tower Times," and East's literary art magazine, "Expressions." Students will learn advanced techniques in photography, graphic design, and page layout. Software programs include Adobe PhotoShop, Illustrator, and InDesign. Units of study include: advanced photography, graphic design, and page layout.

Design Drafting CAD Architecture

TEC 210

.5 credit

Semester 1 or 2

Grade: 10, 11, 12

*No prerequisites.**Meets recommendation: CTE*

This course will employ the use of AutoDesk Inventor, Google Sketchup and AutoDesk Revit. Inventor is a 3 Dimensional Solids Modeling program that allows the students to design in 3D! Student will become familiar with the basic commands and functions of the software while they solve problems and design solutions both on paper and 3Dimensionally on the computer. Students will learn the basics of architecture design and techniques. Students will learn major house and building styles by mimicking these styles while building houses using both computer programs. Students will complete the semester designing a house following their own style. Units of study include: drafting with computer/AutoCAD Problem Solving Activities, and Architecture.

Advanced Furniture & Cabinetry (WoodLINK)

TEC 221/222

1.0 credit

Semester 1 and 2

Grade: 10, 11, 12

*Prerequisite: Furniture and Cabinetry**Meets recommendation: CTE*

Completion of woods projects and participation in various activities sponsored by the student organization will give opportunity for the student to be reviewed and presented the Madison East SkillsUSA Master Wood worker Certificate. Class fee \$40.00.

This course is the advanced study of wood product processing. Emphasis is placed on safety, project planning, design, and understanding of procedures and the use of jigs and fixtures in woodworking. Areas of exploration include veneering, CNC technology, and curved and circular work. There are assigned projects with additional time

available for student-selected projects. Examples of projects include shaker style furniture, cabinets, functional student furniture, and tables. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing, known as WoodLINKS.

Auto Technology 2

TEC 231/232 1.0 credit Semester 1 or 2 Grade: 10, 11, 12
 Class Fee \$40.00 Meets recommendation: CTE

Prerequisite: Automotive Technology 1/ Engine Systems

This course is designed for those students interested in entering the automotive profession or gaining a solid foundation of the automotive field. Students will learn how to diagnose and repair electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. The three Cs of auto repairs will be emphasized: Concern, Cause, and Correction of system problems. If this course is taken at Memorial, it is considered the first year of the Auto Youth Apprenticeship Program. Students will be required to join SkillsUSA student organization as part of this course. Student is responsible for obligations. Units of study include: basic car care, cooling system, and basic scan tool use.

Metals Manufacturing 2

TEC 250 .5 credit Semester 1 or 2 Grade: 10, 11, 12
 Class Fee \$20.00 Meets recommendation: CTE

Prerequisite: Completion of Metals Manufacturing 1.

This is a sequential course to Metals Manufacturing 1 and covers advanced operations and techniques in the following metal fabrication processes: CNC machine shop, sheet metals, and welding. Completion of assigned and individually developed projects is required. Tuition costs will be lowered as a result. Units of study include: advanced individual projects, team project, and manufacturing industry.

AS Metals Manufacturing/Machine Tooling

TEC 251/252 .5 credit Semester 1 or 2 Grade: 10, 11, 12
 Class Fee: \$20.00 Meets recommendation: CTE

Prerequisite: completion of Metals Manufacturing 1.

This course applies the principles to basic machine tooling and automation. In addition, jigs and fixtures used in manufacturing will be designed and produced. Students will use equipment in the metals manufacturing labs to produce individual metal projects. Dual Credit is available through Madison Area Technical College.

Digital Electronics (Project Lead the Way)

TEC 255/256 1.0 credit Semester 1 and 2 Grade: 10, 11, 12
 Class Fee: \$40.00 Meets recommendation: CTE

Prerequisite: Algebra 1. This course is part of the new district initiative in Engineering known as, Project Lead the Way. It is possible for students to take the complete engineering sequence, but not required. College credit is available.

Digital electronics and micro-computers. This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Student is responsible for obligations. This course is part of the new district initiative in Engineering known as, Project Lead the Way. College credit is available. Units of study include: basic circuits to advanced computer simulated circuits.

Introduction to Construction (Wood LINKS)

TEC 261/262 1.0 credit Semester 1 and 2 Grade: 10, 11, 12
 Class Fee: \$20.00 Meets recommendation: CTE

Prerequisite: Introduction to Woodworking

This course is intended for students interested in construction, home building, remodeling, and other building trades. Class activities will include project work in carpentry (framing and finish), electrical, plumbing, drywall, siding, roofing, and HVAC (heating, ventilation, air conditioning). Home repairs and maintenance will also be studied. Skills taught will benefit a wide group of students ranging from those directly entering the work force after high school to those continuing in post-secondary education (2 year or 4 year) in the construction field. This

course is part of the district's new initiative focusing on industry based training in wood products manufacturing, known as WoodLINKS.

Principles of Engineering (Project Lead the Way)

TEC 271/272 1.0 credit Semester 1 and 2 Grade: 10, 11, 12

Class Fee: \$40.00

Meets recommendation: CTE

Prerequisite: Geometry recommended, or currently enrolled. This course is part of the new district initiative in Engineering known as Project Lead the Way. It is possible for students to take the complete engineering sequence, but not required. College credit is available.

Students will experience engineering and design technology and use various technological systems and manufacturing processes that demonstrate ways in which engineers and technicians use math, science and technology to benefit people. This course will be a mix of hands-on and academic activities including computer-aided design projects, research activities, case studies, team product development, and discussions on the social and political consequences of technological change. Student is responsible for obligations. This course is part of the new district initiative in Engineering known as, Project Lead the Way. College credit is available.

Introduction to Film and Video Production

TEC 280 .5 credit Semester 1 or 2 Grade: 10, 11, 12

Class Fee: \$20.00

Meets recommendation: CTE

Students will work on planning, shooting, and editing short news segments that will air on East High's school newscast, TowerTV. Students will learn key functions and capabilities of the video camera and gain an understanding of editing software through the use of Apple's Final Cut Pro. The emphasis will be on video storytelling by producing segments that will be shown throughout the school and MMSD's cable channel.

Advanced Video and Film Production

TEC 301/302 .5 credit Semester 1 or 2 Grade: 11, 12

Class Fee: \$20.00

Meets recommendation: CTE

Prerequisite: Introduction to Film and Video Production. Signature of Instructor required.

Students will have the chance to expand on concepts learned in Introduction to Film & Video Production. This will include work with longer format video projects to be used both on TowerTV and the MMSD cable channel. Students will also explore the use of advanced software including Motion, Soundtrack Pro, DVD Studio Pro and Garage Band. Other areas to be included are: Lighting for Video/Film, Set design, and Video animation. Production work may include live programming of sporting events for TowerTV.

Fine Woodworking (Wood LINKS)

TEC 311/312 1.0 credit Semester 1 and 2 Grade: 11, 12

Class Fee: \$40.00

Meets recommendation: CTE

Prerequisite: Advanced Furniture and Cabinetry. Course is open to all who may want to pursue a career in the construction industry. When the class fills, preference will be given to students who have successfully completed Woods 1.

This course is the advanced study of wood product processing. Emphasis is placed on the production process. This includes project planning, design, presentation and understanding of procedures, and the use of jigs and fixtures in woodworking. Areas of exploration include career exploration. There are assigned or student selected projects. Student is responsible for researching processes and materials for the completion of their projects. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing, known as WoodLINKS. Student is responsible for obligations.

Computer Integrated Manufacturing (Project Lead the Way)

TEC 321/322 1.0 credit Semester 1 and 2 Grade: 11, 12

Class Fee: \$40.00

Meets recommendation: CTE

Prerequisite: Completion of Introduction to Engineering and Principles of Engineering OR completion of Metals Manufacturing 1 and Metals Manufacturing 2. This course is part of the new district initiative in Engineering

known as, Project Lead the Way. It is possible for students to take the complete engineering sequence, but not required. College credit is available.

Students will take the three-dimensional modeling skills they learned in Introduction to Engineering and combine them with the building and manufacturing processes learned in Principles of Engineering to a whole new level that includes rapid prototyping and using a three-dimensional printer. Using Autodesk Inventor and other computer programs, students will create actual models and prototypes with Computer-Numeric-Control machines, robotic arms and automated manufacturing. Student is responsible for obligations. This course is part of the new district initiative in Engineering known as, Project Lead the Way. College credit is available.

Automotive Technology 3

TEC 353/354

1.0 credit

Semester 1 and 2

Grade: 11, 12

Class Fee: \$40.00

Meets recommendation: CTE

Prerequisite: Completion of Automotive Technology 2.

This course is designed for further study of the automotive profession. It is an independent study and offers further practice with automotive competencies in electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. Students will be required to join SkillUSA student organization as part of this course. Student is responsible for obligations.

Aerospace Engineering (Project Lead the Way)

Memorial

1.0 credit

Semester 1 and 2

Grade: 10, 11, 12

Prerequisite: Freshman level science and signature of Instructor required.

Meets recommendation: CTE

Recommendation of Physics and Algebra 2 or concurrent enrollment. This class is available only at Memorial, see your counselor for more information.

Aerospace is a two-semester advanced level, integrated, project-based science course with an emphasis on the application of the biological, chemical, and physical principles inherent in aviation and space studies. Units of instruction include aviation history, aerodynamics, aircraft stability and design, physiology of flight, aerospace materials science, space exploration, and autonomous vehicle design. Most lessons are reinforced through the use of computer technology and software such as Flight Simulator, Inventor, and AERY. Field trips during the year offer the opportunity to pilot single-engine aircraft under the guidance of certified flight instructors and to experience kit built aircraft manufacturing, the EAA museum, and aircraft restoration. Student is responsible for obligations. This course is part of the district initiative in Engineering known as Project Lead the Way.

Civil Engineering and Architecture (Project Lead the Way)

Memorial/LaFollette

1.0 credit

Semester 1 and 2

Grade: 10, 11, 12

College credit is available.

Meets recommendation: CTE

This class is available only at Memorial and LaFollette. See your counselor for more information.

Recommendations: Successful completion of Geometry or currently enrolled. Introduction to Engineering Design or Principles of Engineering.

In this class you will learn about Civil Engineering and Architecture, using the design process to solve real world problems and apply your creative skills to hands-on-projects. You will use state -of- the-art software to design residential and commercial buildings. This course covers topics such as the roles of civil engineers and architects, project planning, building design, project documentation and presentation, and interior design. Student is responsible for obligations. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.

Engineering Design and Development (Project Lead the Way)

Memorial

1.0 credit

Semester 1 and 2

Grade: 10, 11, 12

College credit is available.

Meets recommendation: CTE

Prerequisite: At least one Project Lead The Way course and signature of instructor. This course is only offered at Memorial, see your counselor for more information.

Engineering Design & Development is the capstone research and development course for all of the engineering courses. Engineering Design and Development is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles

developed in the preceding engineering course(s) and are guided by the teacher and community mentor/professional engineers. At the end of the course, students must submit a final written report and defend their solutions to a panel of outside reviewers. Student is responsible for obligations. This is part of the district initiative in Engineering known as Project Lead the Way.

Automotive Technology 4 – Advanced Engines

Memorial/LaFollette 1.0 credit Semester 1 and 2 Grade: 11, 12

Prerequisite: Automotive Technology 2

Meets recommendation: CTE

This course is offered only at LaFollette and Memorial. See your counselor for more information.

This course is designed for further study of the automotive profession. It is the study of and further practice with automotive competencies in engine rebuilding which includes engine removal, disassembly, inspection, and measurement, cleaning, engine machining, re-assembly, test operation, welding basics, and torch operation. Students will be required to join SkillUSA student organization as part of this course. Student is responsible for obligations.

Automotive Youth Apprenticeship Program

Memorial 1.0 credit Semester 1 and 2 Grade: 11, 12

Prerequisite: On track for high school graduation, Automotive Technology 1/Engine Systems.

College credit is available. This course is only offered at Memorial. See your counselor for more information.

Automotive Youth Apprenticeship (YA) is a rigorous statewide elective program for high school juniors and seniors that combine academic and technical classroom instruction with mentored on-the-job learning. It's an opportunity for students to experience a career while still in high school.

Madison students have the option of attending Memorial High School for the first period of the day or participating at McFarland High School on Wednesday evening from 6:00-9:00 pm. Students who continue the program for a second year, will continue taking courses at Madison Area Technical College. The second year courses run Monday and Wednesday evening from 6:00-9:00 pm, and courses are taught by technical college staff. Please see your counselor and your automotive teacher if you are interested in this program. Student is responsible for obligations.

2010 - 2011 CURRICULUM GUIDE



LA FOLLETTE HIGH SCHOOL
702 PFLAUM ROAD
MADISON, WISCONSIN 53716-2199

BUSINESS, INFORMATION TECHNOLOGY AND MARKETING EDUCATION

VOCATIONAL EDUCATION / SCHOOL-TO-WORK CREDITS

☐ Computer/IT Based

| | Recommended Electives | Additional Electives |
|--------|--|---|
| Gr. 9 | Career Exploration, Computer Literacy, Desktop Publishing & Graphic Design, Information Technology, Keyboarding, Web2.0, Web Page Design, Yearbook Design & Publishing | Marketing |
| Gr. 10 | Accounting 1, Accounting 2 for Dual Credit, Business Economics, Computer Literacy 2, International Business, Personal Finance, Career Exploration, Computer Literacy, Desktop Publishing & Graphic Design, Information Technology, Computer Hardware/Software Repair & Essentials, Keyboarding, The Lance—Newspaper Publishing, Web2.0, Web Page Design, Yearbook Design & Publishing. | Advertising & Sales, Leadership Development, Marketing |
| Gr. 11 | Economics AP, Business Law, Career Internship, Accounting 1, Accounting 2 for Dual Credit, Business Economics, Career Exploration, Computer Literacy, Computer Literacy 2, Desktop Publishing & Graphic Design, Information Technology, Computer Hardware/Software Repair & Essentials, International Business, Keyboarding, Personal Finance, The Lance—Newspaper Publishing, Web2.0, Web Page Design, Yearbook Design & Publishing | Sports & Entertainment Marketing, Starting Your Own Business, Advertising & Sales, Leadership Development, Marketing |
| Gr. 12 | Accounting 1, Accounting 2 for Dual Credit, Economics AP, Business Economics, Business Law, Career Exploration, Career Internship, Computer Literacy, Computer Literacy 2, Desktop Publishing & Graphic Design, Information Technology, Computer Hardware/Software Repair & Essentials, International Business, Keyboarding, Personal Finance, The Lance—Newspaper Publishing, Web2.0, Web Page Design, Yearbook Design & Publishing | School Store—Marketing Management, Advertising and Sales, Leadership Development, Marketing, Sports & Entertainment Marketing, Starting Your Own Business |

Accounting 1

BUS411

1 credit

School-to-Work
Grades 10-12

A MUST FOR ANYONE PLANNING ON A CAREER IN BUSINESS! This semester-long course is an introduction to the world of accounting. This is a must have for any student interested in pursuing any business related major or for students who want to start their own business. Every business in our society is impacted by accounting based decisions.

In this course you will have the opportunity to use real-world accounting software, source documents, financial statements and multimedia to prepare and analyze business transactions.

You might also consider LaFollette's Career Internship course (see Mr. Graham for details) for potential career employment opportunities. A Wisconsin state-sponsored Youth Apprenticeship program is also available.

Accounting 2 for Dual/Transcripted Credit

BUS421

1 credit

School-to-Work
Grades 11-12

Prerequisite: Accounting 1

*MATC College/Transcripted Course (receive both high school & MATC college credits)

This course is designed to help you understand basic accounting principles and procedures. The two major objectives are (1) preparation for a career in an accounting or any business-related field, & (2) preparation for personal uses of accounting in your everyday life.

Major concepts include how to record perpetual business transactions, determine a business profit or loss, prepare financial reports and budgets, and analyze financial statements for personal and business decisions.

You might also consider LaFollette's Career Internship course (see Mr. Graham for details) for potential career employment opportunities. A Wisconsin state-sponsored Youth Apprenticeship program is also available.

As a result of an articulation agreement with MATC, students (Grades 11-12) completing this course with a grade of B or better will receive "college, transcripted credit", both high school and MATC college credit. By participating in the dual credit program, it enables you to make substantial progress toward your college degree before finishing high school.

Economics AP (Macro and Micro)

BUS501

1 credit

School-to-Work
Grade 11-12

Advanced Placement Economics covers both micro and macro economic issues. Microeconomics provides instruction in each of the following areas: basic economic concepts, the nature and functions of product markets, factor markets, and market failure and the role of government. Macroeconomics provides instruction in each of the following areas: basic economic concepts, measurement of economic performance, national income and price determination, financial sector, inflation, unemployment, and stabilization policies, economic growth and productivity, open economy: international trade and finance.

Students who elect to take AP Economics qualify to take the Advanced Placement exams in both Micro and Macro Economics in the spring of the year. Since Micro and Macro Economics are two distinct courses in college, doing well on those exams can equate to substantial money savings in the future. This is an excellent course choice for anyone, especially for those students who are interested in majoring in business at the collegiate level.

Business Economics

BUS780

1/2 credit

School-to-Work
Grades 10-12

This class is designed for the student who would like to learn about economics, but isn't interested in taking the Advanced Placement Economics course. Students who take this class will have the opportunity to learn about how people make decisions of an economic nature, how demand and supply impacts product pricing, how businesses decide whether or not to increase the prices of their goods and services, how businesses decide how much to produce, as well as, other issues that impact the economy as a whole, such as unemployment, inflation, and interest rates. This class provides students with a good foundation in economics so that current events, politics, and everyday decisions make more sense to them. This is an excellent course choice for anyone, especially for those students who are interested in majoring in business at the collegiate level.

Business and Personal Law

BUS790

1/2 credit

School-to-Work
Grade 11-12

Students who enjoy learning about trials, discussing the impact of current events on law and want to know more about their rights as individuals should take this class. Students will participate in a variety of interactive and practical activities, such as in class mock trials, interpreting contracts, Internet activities, a field trip, and guest speakers as part of the process of learning how law, specifically business law, impacts society.

Career Exploration

BUS740

1/2 credit

School-to-Work
Grades 9 - 12

YOU'RE HIRED! Words everyone wants to hear when interviewing. Explore your career interests while learning how to accomplish this and more. In doing so, you will develop your resume and interviewing skills and portfolio. Classroom discussions and activities relate to job attainment and advancement (promotions). You will also start or add to your La Follette service card as you complete an on-campus service activity. Additionally, a trip to the Wisconsin Job Service on Madison's east side is planned. The purpose of your visit will be to observe and explore the many free resources this state-based agency provides job hunters and career seekers. In conjunction with this trip, you will also complete a live interview with one of the many different store managers at East Towne Mall. Past history reveals a number of students leaving their interview with a job offer in hand!

Career Internship

STW151

1 credit per Sem
(2 credits max)School-to-Work
Grades 11 - 12

Prerequisite: *Students must complete a program application and interview.*

GET PAID, RECEIVE CREDIT AND GAIN EXPERIENCE. Learn while you earn by linking your classroom knowledge to paid employment in a business environment in the Madison area. Build decision making and leadership skills while applying classroom knowledge in a real business setting.

You may be employed in areas relating to Accounting, Business Support Services, Finance, Information Technology, Law, Marketing, and Real Estate to name a few. These are employment opportunities students would have difficulty securing on their own. At the completion of the course and 180 on-the-job-hours, you will be awarded a State Certified Employability Skills Certificate. A great resume enhancer and conversation piece during your next job interview.

Computer Literacy 

BUS760


1/2 credit

Comp Lit
Grades 9 - 12

Note: This course fulfills either the Computer or Vocational graduation requirement

Note: You may waive this course by taking a waiver test. The test must be taken prior to attendance in the course, and may be taken only once. See your counselor for details.

This class will provide students the opportunity to develop a proficiency using MS Word, MS Excel, MS Access, MS PowerPoint, MS Publisher, as well as, using the Internet appropriately as a research source. Students will complete a variety of project-based problems such as creating a database, creating spreadsheet formulas, creating and modifying documents that are word-processed, creating desktop publishing projects that are both visually appealing and meaningful, and creating and presenting slide-show presentations.

Computer Literacy 2 
Prerequisite: Computer Literacy

BUS770

1/2 credit

School-to-Work
Grades 10-12

COMPUTER LITERACY ON STEROIDS! BECOME THE COMPUTER EXPERT FOR YOUR FAMILY & THE SCHOOL!

This is a one-term advanced personal computer applications course using the more intricate (*and fun*) components of Microsoft Office—the most widely used software package in the world. In addition, new technologies will be studied in the areas of graphic design, website development, multimedia, audio and visual production and many others.

Additionally, students will be assigned to train others with their computer skills (recipients of this tutoring include current La Follette staff, Madison area senior citizens and their peers). When students complete this course, they will have a thorough knowledge of Microsoft Office, PC troubleshooting and the Internet and will be able to solve a variety of personal computer related problems.

Desktop Publishing and Graphic Design 


BUS720

1/2 credit

School-to-Work
Grades 9-12

This course provides skill development in one of the fastest growing technology based industries, graphic design and prepress. Students will learn electronic procedures of designing/producing and editing publications using industry standard software (Adobe Creative Suite) and processes. Students will create, format, illustrate, design, edit/revise, and print publications. Proofreading, document composition/design, and communication competencies, along with digital photography and graphic design elements are also included. Skills learned in this class lend themselves towards many exciting careers.

Course goal: For each student to learn and continually build skills that are beneficial, interesting and have life long meaning that are useful in the business world.

Information Technology - IT Fundamentals 

BUS830

1/2 credit

School-to-Work
Grades 9-12

WE'RE ONE OF THE ONLY SCHOOLS IN THE MIDWEST OFFERING THIS IT PROGRAM! Do you like Computers? Would you like to know more about the Internet and/or how to network computers? Or would you like to explore the areas of digital photography, web-page design and animation, computer programming, or digital sound? If so, Information Technology (IT) Fundamentals is the class for you.

IT Fundamentals introduces the essential skills needed for students to pursue specialized programs leading to technical and professional careers and certifications in the IT industry—one of the hottest career fields today. Students have an opportunity to investigate career opportunities in four major IT areas: Information Services and Support, Network Systems, Programming and Software Development, and Interactive Media. The class is designed around an integrated delivery system that allows students to rotate through four core skill areas in 16 modules. After mastering the exploratory activities, students can then select to pursue an information technology specialty area that can lead to industry recognized certification such as A+, Network +, i-net, etc. in our IT 2 class.

Computer Hardware/Software Repair & Essentials 

BUS840

1/2 credit

School-to-Work
Grades 10-12

*MATC College/Transcripted Course (receive both high school & MATC college credits)

BUILD A COMPUTER! BUILD A NETWORK! START YOUR IT CAREER! LOOKING FOR A CAREER IN THE FIELD OF INFORMATION TECHNOLOGY OR COMPUTERS? OR DO YOU JUST LIKE USING THE COMPUTER?

This course presents an in-depth exposure to personal computer hardware. Students learn the functionality of hardware components as well as suggested best practices in maintenance and safety issues. Through hands on activities and labs, students learn how to assemble & configure a computer, install and work with multiple operating systems, connect up to a network, and troubleshoot computer hardware problems. This course prepares students for CompTIA's A+ Essentials exam and is the equivalent of the first course in the Information Technology programs at Madison Area Technical College. You might also consider LaFollette's Career Internship course (see Mr. Graham for details) for potential career Information Technology employment opportunities. A Wisconsin state-sponsored Youth Apprenticeship program is also available. Students can take this course for College, Transcripted Credit with MATC as well as receiving high school credit.

***As a result of an articulation agreement with MATC, students (Grades 11-12) completing this course with a grade of B or better and passing the CISCO Assessment will receive "college, transcripted credit", both high school and MATC college credit. By participating in the dual credit program, it enables you to make substantial progress toward your college degree before finishing high school.**

International Business and the Global Experience

BUS850

1/2 credit

School-to-Work
Grades 10-12

BECOME A GLOBAL CITIZEN! This course introduces and readies the student to view the world in a whole new way. The student will learn about the global economy, cross-cultural differences, ethics, international economics and their effect on our society both nationally and locally. Examining business in a variety of locations across the globe; discussing differing laws, cultures, international monetary system, global competition, trade policies, foreign investment and current international business trends and developments associated with current events taking place on a daily basis. Both theoretical and practical dimensions of the world economy will be discussed, analyzed and understood by each student.

Keyboarding 

BUS700

1/2 credit

School-to-Work
Grades 9-12

COMPUTERS ARE IN YOUR FUTURE! So developing your keyboarding skill is a must! By taking this class students will learn how to type without looking at their fingers, and by using the correct home row technique. After learning the keyboard and developing a certain level of speed and accuracy, students will learn the proper way to set up personal business letters, business letters, memos, tables, reports, title pages, and outlines. Students will also learn how to correctly format employment related documents. Students will use both Microtype Ultra and Ainsworth keyboarding programs to learn how to type, and will use Microsoft Word for production work.

Personal Finance

BUS750

1/2 credit

School-to-Work
Grades 10-12

ONE OF THE MOST USEFUL CLASSES A HIGH SCHOOL STUDENT CAN TAKE IN ORDER TO PREPARE FOR THEIR FUTURE. This one-semester class will teach students: how to prepare themselves for the job market, how taxes impact their lives, how to create and use a budget, how to build wealth, the pros and cons of home ownership versus renting, how credit can be both your best friend and your worst enemy, how financial institutions work, and about the different types of insurance. Students will also learn about investing in stocks, bonds, and mutual funds, as well as how to save money and why it is important to save money. Don't be left at a disadvantage in life due to a lack of basic financial knowledge. You might also consider LaFollette's Career Internship course (see Mr. Graham for details) for potential career employment opportunities. A Wisconsin state-sponsored Youth Apprenticeship program is also available. **ALL STUDENTS WILL PARTICIPATE AT NO COST IN THE National Financial Literacy Challenge,** an initiative recommended by the President's Advisory Council on Financial Literacy.

Web-Page Design 

BUS810

1/2 credit

School-to-Work
Grades 9-12

WIN THE RACE TO TAKE ADVANTAGE OF THE LIMITLESS POSSIBILITIES OF THE EXPLOSION OF WEB PAGES. The world has become digital with over two billion web pages on the Internet as of today. Our global market depends upon effective communication over the net and a vast web presence. With a combination of hands-on instruction and in-class projects, you will explore the tools and techniques used to create and build these websites.

This class covers basic web design principles, utilizes today's most popular software packages (ex. Frontpage, Dreamweaver, and the Adobe Creative Suite with Photoshop) and gives you the skills to craft your own web-page and post it to a web server. Additionally, students will work together in teams and individually to apply concepts learned by maintaining the school's web pages. Join us for an exciting new adventure in creating web pages.

Web2.0--21st Century Literacies 

BUS860

1/2 credit

School-to-Work
Grades 9-12**(Social Networking, Youtube, Wikis & more)**

YOU ARE A 21ST CENTURY LEARNER, LEVERAGE THE POWER OF THE WEB & APPLY IT TO YOUR ACADEMIC LIVES.

Innovation continues to occur on the internet faster than most can keep pace. This course is designed to directly address the use of technology in the classroom and help students become proficient with a suite of applications and model skills that will help them be better 21st century students. Some of the Web 2.0^o technologies covered in this course include: *social networking (ex. Facebook), YouTube, wikis, blogs, RSS, smartphones, social bookmarking tools, photo sharing tools, mapping tools, audio and video podcasts, screencasts and everything Google.* **Leverage the power of the web! You will blog, collaborate, navigate, analyze, question, think, create, connect and learn! Are you ready?**

Yearbook Design and Publishing 

BUS301

1 credit

School-to-Work
Grades 9-12**Prerequisite: Desktop Publishing and Graphic Design or teacher recommendation**

BE A PART OF LA FOLLETTE HIGH SCHOOL'S NATIONAL AWARD-WINNING YEARBOOK STAFF! This course is a one-semester course driven by student decision-making along with rigorous curriculum to learn industry standard software packages, production processes and deadline achievement. The focus is producing a quality yearbook for the student body. Students learn to write concise body copy and captions as well as to operate various desktop publishing software packages. Color theory, photographic composition, layout and design concepts and image use will be taught and used in the process of the creation of the yearbook. In addition, students are introduced to marketing and advertising principles to make their published work a success. This course is great for those students who work well independently and within a team environment. Each student will be influential in many decisions made about the creation and design of the yearbook.

Course goal: For each student to obtain skills that are beneficial and align with potential job goals while building interpersonal skills and relationships that are socially advantageous.

The Lance: Newspaper Publishing and Writing for the Media 📖 BUS551 1 credit
Prerequisite: teacher recommendation for multiple credit and strong writing skills

School-to-Work
Grades 10-12

ARE YOU INTERESTED IN JOURNALISM? Acting like a true journalist gives this class a genuine and unique feel. Learning newspaper and advertising design, successful interviewing skills, building journalistic writing skills and working under a business-like, deadline-oriented atmosphere are just a few aspects of this class. Students will learn to quickly and effectively work under pressure, how to think critically and objectively, and other essential characteristics that are needed in all careers. If you enjoy writing, graphic design and photography, this student-run newspaper (*The Lance*) may be that missing piece to complete your set of great La Follette experiences. Those interested in editor positions may apply and take the class for the entire school year. Students can take this class more than once for credit.

Course goal: For each student to learn effective writing skills that are beneficial in any aspect the business world and to use critical thinking skills to objectively assess school and business situations.



Students interested in a combined class and job placement experience should refer to the Interdepartmental Studies Section of this Curriculum Guide and our Career Internship (STW151) offering.

MARKETING EDUCATION

VOCATIONAL EDUCATION / SCHOOL-TO-WORK CREDITS

| Recommended Electives | | Additional Electives |
|-----------------------|---|--|
| Gr. 9 | Marketing | Career Exploration, Computer Literacy, Desktop Publishing & Graphic Design, Information Technology, Keyboarding, Web2.0, Web Page Design, Yearbook Design & Publishing |
| Gr. 10 | Advertising & Sales, Leadership Development, Marketing | Accounting 1, Accounting 2 for Dual Credit, Business Economics, Computer Literacy 2, International Business, Personal Finance, Career Exploration, Computer Literacy, Desktop Publishing & Graphic Design, Information Technology, Computer Hardware/Software Repair & Essentials, Keyboarding, The Lance – Newspaper Publishing, Web2.0, Web Page Design, Yearbook Design & Publishing |
| Gr. 11 | Sports & Entertainment Marketing, Starting Your Own Business, Advertising & Sales, Leadership Development, Marketing | Economics AP, Business Law, Career Internship, Accounting 1, Accounting 2 for Dual Credit, Business Economics, Career Exploration, Computer Literacy, Computer Literacy 2, Desktop Publishing & Graphic Design, Information Technology, Computer Hardware/Software Repair & Essentials, International Business, Keyboarding, Personal Finance, The Lance – Newspaper Publishing, Web2.0, Web Page Design, Yearbook Design & Publishing |
| Gr. 12 | School Store—Marketing Management, Advertising and Sales, Leadership Development, Marketing, Sports & Entertainment Marketing, Starting Your Own Business | Accounting 1, Accounting 2 for Dual Credit, Economics AP, Business Economics, Business Law, Career Exploration, Career Internship, Computer Literacy, Computer Literacy 2, Desktop Publishing & Graphic Design, Information Technology, Computer Hardware/Software Repair & Essentials, International Business, Keyboarding, Personal Finance, The Lance – Newspaper Publishing, Web2.0, Web Page Design, Yearbook Design & Publishing |

Advertising and Sales

MRK710

1/2 credit

School-to-Work
Grades 10-12

This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application. Students who are enrolled in this class will be also members of the LHS DECA Chapter.

Career Internship

STW151

1 credit per Sem
(2 credits max)

School-to-Work
Grades 11 - 12

Prerequisite: *Students must complete a program application and interview.*

GET PAID, RECEIVE CREDIT AND GAIN EXPERIENCE. Learn while you earn by linking your classroom knowledge to paid employment in a business environment in the Madison area. Build decision making and leadership skills while applying classroom knowledge in a real business setting.

You may be employed in areas relating to Accounting, Business Support Services, Finance, Information Technology, Law, Marketing, and Real Estate to name a few. These are employment opportunities students would have difficulty securing on their own. At the completion of the course and 180 on-the-job-hours, you will be awarded a State Certified Employability Skills Certificate. A great resume enhancer and conversion piece during your next job interview.

Leadership Development

MRK720

1/2 credit

School-to-Work
Grades 10-12

This is an excellent business course for the motivated student. Management and executive skills for business are explored. Topics include: management styles, supervision techniques, business communications, delegation, goal setting, time management, and situational leadership and team building. Management decision making skills necessary to run a company are discussed.

Activities: Team management exercises, guest speakers, and video tapes will be used.

Marketing

MRK700

1/2 credit

School-to-Work
Grades 9-12

Learning what Marketing is all about and how it works will prepare you for many career opportunities. Marketing in society, consumer behavior, and career exploration are topics covered. Teamwork is emphasized and used to apply the course material. Case studies and decision making exercises make the material realistic. Students will learn how to work cooperatively with co-workers, customers and employers. Students who are enrolled in this class will also be member of the LHS DECA Chapter.

School Store: Marketing Management

MRK151

2 credits

School-to-Work

Prerequisite: Marketing (MRK700) AND program application and interview with instructor.

Grade 12

Students enrolled in this class become the managers of the school store. Marketing Management is a program that will prepare you, the student, to operate businesses that sell, rent, or lease goods and services. This course will provide insight into the theory behind buying, selling, storing, pricing, promoting, displaying, financing, and other activities necessary for successful business operations. Students will interact with company representatives to make decisions that will impact the operation of our school based enterprise. NOTE: a significant portion of the learning activities and opportunities occur outside the traditional classroom and day.

Sports and Entertainment Marketing

MRK730

1/2 credit

School-to-Work

Recommended: Marketing

Grades 11-12

LADIES AND GENTLEMEN, START YOUR ENGINES! Strap yourself in and hang on as you explore the ever exciting and changing field of sports and entertainment marketing. Classroom instruction in the areas of planning, organizing, and implementing an event assists you as you and your peers plan and host an actual event. Specific areas of study include the 4-Ps of marketing and basic economic principles as they relate to event promotions, sponsorships, sales, development, and management. Additionally, a scheduled trip to the Bradley Center is planned. During the course of this experience you will observe a professional sports marketing lab (Milwaukee Bucks' game) in motion and at work. You will also tour the Bradley Center, interact with Bucks' marketing staff, and participate in a free throw shooting contest. Other potential trips include the UW-Madison and Madison Mallards.

Starting Your Own Business

MRK800

1/2 credit

School-to-Work

Grades 11-12

HAVE YOU THOUGHT ABOUT STARTING YOUR OWN BUSINESS? Would you like to learn the steps in creating a small business or write your own business plan and present it to business owners? Learn about developing your business idea, location, marketing, financing, managing people, and legal guidelines. You will practice business and economic principles in this interactive course that will take you beyond the school building and into the business community. This is a great course for college-bound students pursuing business or marketing or students thinking about opening a business right after high school. The course is team taught with community, business, and government leaders through the Business & Education Partnership and Junior Achievement.



Students interested in a combined class and job placement experience should refer to the Interdepartmental Studies Section of this Curriculum Guide and our Career Internship (STW151) offering.

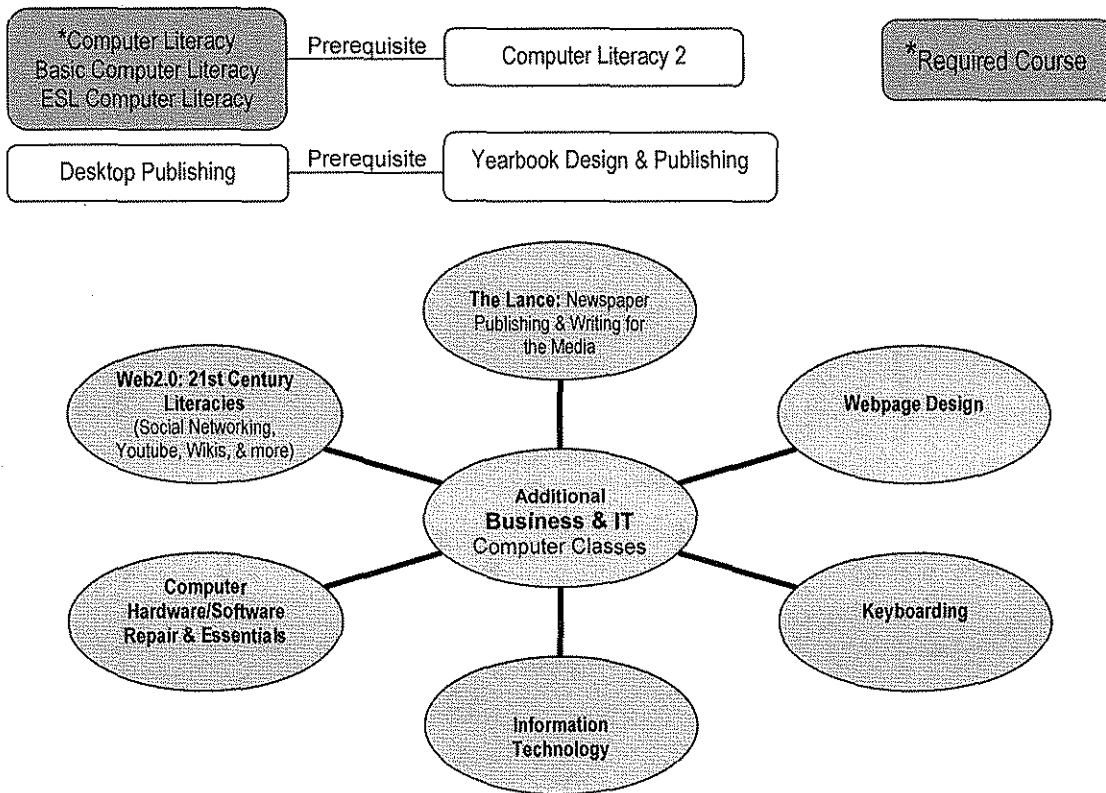
COMPUTERS

There is a **1/2 credit computer literacy requirement for graduation**. There are two options for completing this requirement. The first option is recommended for beginning students. They should elect Computer Literacy (course indicated by an asterisk*). Computer Literacy provides in-depth application units in word processing, database management, spreadsheets, presentation software, as well as desktop publishing software.

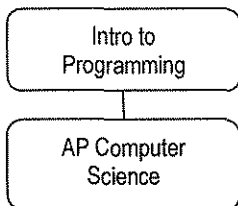
The second option is for students who already have strong computer literacy skills and who can successfully complete a waiver process. A **waiver test** will be given. Students should see their counselor for details. They can fulfill the graduation requirement with another computer course. Students should use their own proficiency, goals and knowledge as a guide in course selection.

Since computer programming languages are always changing, students electing a computer programming course should check with the instructor to clarify the programming language used. The chart below shows the computer courses offered by department. Please see individual course descriptions and prerequisites when making your course selection.

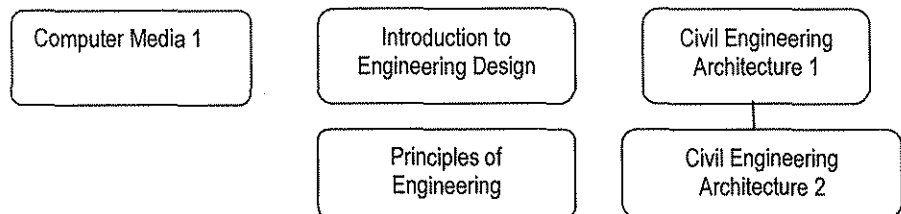
BUSINESS & INFORMATION TECHNOLOGY DEPARTMENT



MATH DEPARTMENT



APPLIED TECHNOLOGY DEPARTMENT



See specific department for class descriptions.

FAMILY AND CONSUMER SCIENCE

Family and Consumer Education is the study of the individual, the family, and their interrelationships with society and the world of work.

Family/Consumer Education examines the family's role in developing work attitudes, employability skills, and relationships between job life and family life. As a high school vocational content area, Family/Consumer Education has the work of the family as an area of study.

Family/Consumer Education has a home component and a job component. The home component prepares students for work in the family enterprise. The job component prepares students for entry into related employment or for careers accessed through post-secondary educational opportunities. The curriculum assists students to make reasoned decisions, develop healthy relationships, and to become contributing members of society. Students use critical and creative thinking skills to address major concerns of a family: human growth and development, health, food, shelter, clothing, consumer economics and careers. Students develop an understanding of the interactions between forces in the community and the family.

| | | | |
|-------------------------------|--------|------------|-------------------------------|
| <u>Culinary Basics</u> | FCS700 | 1/2 credit | School-to-Work Grades 9-12 |
|-------------------------------|--------|------------|-------------------------------|

This course is for the student who wants to learn food preparation skills for making healthier lifestyle decisions by studying nutrients and the food pyramid. Principles of safety and sanitation will be utilized as well as terms describing a variety of food preparation techniques. There is a fee for this course.

| | | | |
|-------------------------------------|--------|------------|--------------------------------|
| <u>International Cuisine</u> | FCS710 | 1/2 credit | School-to-Work Grades 10-12 |
|-------------------------------------|--------|------------|--------------------------------|

Prerequisite: Culinary Basics

Sample food and culture around the world, cooking American regional and world cuisine. Explore geographical regions of the United States (including the Northwest, Southwest, New England, Midwest and South) and the world (including Mexico, Latin America, France, Italy, Greece, Japan, China, India and Africa). There is a fee for this course.

| | | | |
|---------------------------------------|--------|------------|-------------------------------|
| <u>Gourmet Chef I Prostart</u> | FCS720 | 1/2 credit | School-to-Work Grade 10-12 |
|---------------------------------------|--------|------------|-------------------------------|

Turn an interest in foods into an art or an occupation. In this course, you will study the use of kitchen tools and gourmet cooking techniques. Prepare restaurant-style meals and participate in food service catering. Prostart is an initiative of the National Restaurant Association Education Foundation, which offers a variety of scholarships and entry into culinary competitions.

| | | | |
|-----------------------------|--------|------------|-------------------------------|
| <u>Sewing Basics</u> | FCS730 | 1/2 credit | School-to-Work Grades 9-12 |
|-----------------------------|--------|------------|-------------------------------|

Sewing basics is for the student who wants to learn hands-on-skills. This class teaches basic hand sewing and machine techniques. The students will explore the field of textiles and will complete samples that will illustrate sewing terms. A crazy quilt square will be constructed to enlighten the students on the possibilities of recycling and redesigning. They will then put these ideas into practice on a garment of their own. The student will purchase supplies for and complete one or more projects, fitted for him/herself. There is a fee for this course.

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|-------------------------|--------|------------|-------------------------------|
| <u>Sewing II</u> | FCS740 | 1/2 credit | School-to-Work Grades 9-12 |
|-------------------------|--------|------------|-------------------------------|

Prerequisites: Sewing Basics

This course is for the student who has taken sewing basics and wants to improve their sewing skills. They will learn more clothing construction techniques and alteration techniques on apparel purchased by and made for themselves. This course will also take a look at career options in the fashion industry. There is a fee for this course.

| | | | |
|--------------------------|--------|------------|--------------------------------|
| <u>Sewing III</u> | FCS790 | 1/2 credit | School-to-Work Grades 10-12 |
|--------------------------|--------|------------|--------------------------------|

Prerequisites: Sewing II

This course is a continuation of sewing skills from Basic Sewing and Sewing II. There is a fee for this course.

| | | | |
|--|--------|------------|-------------------------------|
| <u>Health Science Occupations I</u> | FCS750 | 1/2 credit | School-to-Work Grades 9-12 |
|--|--------|------------|-------------------------------|

This course is for the student interested in the health care field. The student learns about a variety of medical occupations, medical terminology, standard precautions, and medical and legal issues in the growing field of health services. You will learn to take vital signs, use medical terminology, and collect and organize medical data. It is expected that all Health Science Occupation students will become H.O.S.A. members.

Health Science Occupations II/III (CNA)

FCS231

1 credit

School-to-Work
Grade 11-12

Prerequisites: Successful completion of *Health Science Occupations (FCE750)* or instructor signature required. This course is recommended for students 16 years old and above.

This course is team taught by a vocationally certified teacher and a registered nurse. Students learn and apply care giving skills in lab and professional settings. Students seeking employment in any health care field will find this a valuable first step! Nursing Assistant is a pre-requisite to all Wisconsin Technical College System nursing programs and highly regarded in 4-year college admissions. Unit of study and skills include: human development, infection control, patient transfer, health and disease, personal care and hygiene, nutrition, and special care.

To meet certification requirements, students must complete clinical experiences in a local health care agency arranged by the teacher, maintain a grade of 75% or better, and meet attendance requirements. The high school is not responsible for transportation. A medical checkup, TB skin tests, successful background check, and \$115 certification test fee are required. Class meets for additional hours of lab and clinical time on weekends, evenings, and/or breaks.

Medical Terminology

FCS850

1/2 credit

School-to-Work
Grade 10-12

Prerequisites: *Health Science Occupations I* and *Health Science Occupations II*

This course deals with the medical terminologies related to all of the body systems. It will cover 150-200 words per system. Dual credit with MATC. Textbook to be purchased by the student (\$56.00).

Housing and Interior Design

FCS760

1/2 credit

School-to-Work
Grades 10-12

Explore housing now and in the future. You will study what goes into housing choices, both interior and exterior, and look at current trends in housing design. This course takes a look at principles and elements of design. You will explore housing careers, design interior living spaces and complete an entire floor plan of a house.

Child Development I

FCS820

1/2 credit

School-to-Work
Grades 10-12

This course focuses on child's growth and development from conception to age six. Students will learn the intellectual, physical, emotional, and social stages of development. This course is valuable to those who will be parents or those who will be working with children in the future.

Child Development II (ACCT)

FCE830

1/2 credit

Career & Tech Ed
Grade 11-12

***Prerequisite-Child Development I and teacher approval**

This course will follow a DPI curriculum. Students will plan and operate a play school for 3-5 year olds while they observe child development. They will receive an ACCT (Assistant Child Care Certification) upon completion of the course with a C or above average, 90% attendance, and recommendation of the teacher. This certification will allow a student to work in a licensed day care at age 17.

Independent Living

FCS770

1/2 credit

School-to-Work
Grades 11-12

This class is for anyone who one day will be in their own apartment or house. It takes an in-depth look at finding a housing unit, reading a lease, learning about renter/landlord responsibilities and legal issues. Selecting a roommate, protective behaviors, health concerns, buying a car, insurance, food and budgeting are areas covered. The course ends with a design project of the student's choosing; creating an apartment floor plan and furnishings.

Marriage and Family Living

FCS780

1/2 credit

School-to-Work
Grade 11-12

This course is designed to examine and understand the importance of the family unit in our society, the changes taking place and how these changes affect the individual and families today. Emphasized areas include: personal development, life styles, communication, sexuality, family crises, stress management, and parenthood. The computerized "Baby Think It Over" models will be included in the parenthood unit. A research project related to families will also be completed.



Students interested in a combined class and job placement experience should refer to the Interdepartmental Studies Section of this Curriculum Guide and the Career Internship (STW151) offering.

INTERDEPARTMENTAL STUDIES

Students Teaching Students-AOD

GEN700

1/2 credit

Elective
Grades 11-12

This class will focus on working with younger students in a leadership role. You will start the class with team building and goal setting activities within the class. We then move into groups and focus on important topics to teach teens. (Drugs, alcohol, peer pressure, gangs, smoking, etc.) You will develop as a team a unit plan filled with different lessons to teach younger students. The students enrolling in this class will have to be recommended by other staff members in the building based on their leadership abilities. Regular attendance is mandatory to be successful in class.

Students who select this course should know that we will be going off campus for two field trips and for possible school visitations. Students may need access to personal transportation.

Classical Mythology

GEN740

1/2 credit

Fine Arts
Grades 9-12

Students will be able to make a connection between the ancient Greek/Roman societies and American society. Students will interact with the written word, as well as art and media, learning to think more deeply about its meaning and value. Students will be given opportunities to discuss issues that may come up within the context of mythology: justice, the meaning of love, etc...

SAT/ACT Prep (11 – 12)

GEN750

1/2 credit

Elective
Grades 11-12

If you are planning on going to a four or five year college and taking the ACT or SAT college admissions test, this course will prove helpful to you. This ACT/SAT PREP course offers you a prep opportunity to maximize test performance, learn how to extend your vocabularies, increase your comprehension of difficult passages, learn how to write a position/support essay, etc. The primary emphasis will be on ACT prep.

Career Internship

STW151

1 credit per Sem
(2 credits max)

School-to-Work
Grades 11 - 12

Prerequisite: *Students must complete a program application and interview.*

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You may be employed in areas relating to Accounting, Business Support Services, Finance, Information Technology, Law, Marketing, and Real Estate to name a few. These are employment opportunities students would have difficulty securing on their own. At the completion of the course and 180 on-the-job-hours, you will be awarded a State Certified Employability Skills Certificate. A great resume enhancer and conversation piece during your next job interview.

Restorative Justice

GEN800

1/2credit

Elective

Prerequisite: *Application and Interview, see your counselor*

Grades 11 - 12

The class would focuses on educating students in the history, theory, and implementation of restorative justice and practices. Students will be trained as restorative justice circle members and will facilitate circle conferencing. Circle conferencing will be considered as an option for some student discipline cases (e.g. insubordination, minor conflicts, vandalism and graffiti. Restorative practices and circles have proven effective in reducing classroom disruptions, suspensions and expulsions in schools throughout the country. The class would focus on using practical ways to use restorative practices within school time constraints and alongside traditional discipline procedures.

TECHNOLOGY AND ENGINEERING

There are many Technology and Engineering programs available for students wishing to learn more about occupations in technical areas. The following courses are covered in greater detail below. Technology and Engineering sequences are:

Woods and Construction

- 9-10-11-12 Introduction to Woodworking (WoodLINKS)
- 9-10-11-12 Home Maintenance & Improvement (WoodLINKS)
- 10-11-12 Furniture and Cabinetry (WoodLINKS)
- 10-11-12 Advanced Furniture and Cabinetry (WoodLINKS)
- 10-11-12 Introduction to Construction (WoodLINKS)
- 11-12 Fine Woodworking (WoodLINKS)
- 12 Building Science (WoodLINKS)

Transportation and Power

- 9-10-11-12 Consumer Auto
- 9-10-11-12 Outdoor Power Equipment Technology
- 9-10-11-12 Automotive Technology 1/ Engine Systems (Skills USA)
- 10-11-12 Automotive Technology 2 (Skills USA)
- 11-12 Automotive Technology 3 (Skills USA)
- 11-12 Automotive Technology 4/ Advanced Engines (Skills USA)

Technology

- 9-10-11-12 Computer Media in Technology

Engineering - Project Lead The Way Pre Engineering Curriculum

- 9-10-11-12 Introduction to Engineering Design (PLTW)
- 10-11-12 Principles of Engineering (PLTW)
- 10-11-12 Civil Engineering & Architecture (PLTW)
- 11-12 Civil Engineering & Architecture 2

ENGINEERING FOCUS

Students interested in Engineering careers should refer to the table below for courses related to Engineering.

| | Freshman | Sophomore | Junior | Senior |
|--|--|---|--|---|
| Technology and Engineering Courses | Introduction to Engineering Design (IED) | Principals of Engineering (POE) and/or Civil Engineering Architecture | Civil Engineering Architecture 2 (CEA) | Principles of Engineering Civil Engineering Architecture Civil Engineering Architecture 2 |
| Math Track 1 | Algebra 1 | Geometry | Algebra/Trig | Functions, Statistics, and Trigonometry or Algebra Concepts for Transcribed Credit |
| Math Track 2 | Algebra 1 | Geometry | Algebra/Trig or Honors Algebra/Trig | Pre-Calculus |
| Math Track 3 | Honors Geometry | Honors Algebra/Trig | Pre-Calculus and/or AP Statistics | AP Calculus and/or AP Statistics |
| Computer Science | Computer Literacy | Introduction to Programming | AP Computer Science | |
| Science Track 1 (for college major in Engineering) | Honors Biology I | Math Physics I | Honors Math Chemistry and AP Chemistry | Math Physics II and Advanced Science and Engineering |
| Science Track 2 | Biology I | Math Physics I | Math Chemistry | Math Physics II and Advanced Science and Engineering |

Introduction to Woodworking - WoodLINKS

TEC800

1/2 credit

School-to-Work
Grade 9-12

In this hands-on course students will learn modern woodworking skills by building useful projects. The curriculum focuses on standard woodworking procedures, properties of wood, accurate measurement, and the safe use of hand and power tools. At the end of the semester, successful students take home attractive projects and many new skills. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Furniture and Cabinetry - WoodLINKS

TEC810

1/2 credit

School-to-Work
Grades 10-12

Prerequisite: *Introduction to Woodworking*

This course is a continuation of *Introduction to Woodworking*. Students will learn additional advanced skills related to cabinet making and architectural woodworking. Areas of study include: safety, wood material technology, woodworking design, project planning, woodworking machine operation, finishing methods and techniques, industry standards, and customizing. Students will also explore career opportunities and ways that woodworking applies to daily lives. Students will work independently or in groups to complete at least one major project. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Advanced Furniture and Cabinetry - WoodLINKS

TEC231

1 credit

School-to-Work
Grades 10-12

Prerequisite: Furniture and Cabinetry

This course is the advanced study of wood product processing. Topics include: safety, project planning, design and understanding procedures, and using jigs and fixtures in woodworking. Areas of exploration include veneering, CNC technology and curved and circular work. There are assigned projects with additional time available for student-selected projects. Examples of projects include: shaker style furniture, cabinets, functional student furniture, and tables. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Fine Woodworking - WoodLINKS

TEC251

1 credit

School-to-Work
Grades 11-12

Prerequisite: Advanced Furniture and Cabinetry

This course is the advanced study of wood product processing. Emphasis is on the production process, including project planning, designing, presenting, understanding procedures, and the use of jigs and fixtures in woodworking. Students explore related careers through assigned or student selected projects. Students research processes and materials for their projects. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Home Maintenance & Improvement - WoodLINKS

TEC301

1 credit

School-to-Work
Grade 9-12

Students will learn and practice techniques and skills used in maintaining a home. Students will be exposed to basic home construction principles and the functions of related building trade areas. Students will learn about power and hand tools used in the building industry and gain hands-on experience with repairing a leak in copper pipe, patching a hole in a wall, wiring a switch or an outlet, diagnosing fuse problems, and unplugging a drain. Safety practices and procedures are demonstrated, and practiced. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Introduction to Construction - WoodLINKS

TEC261

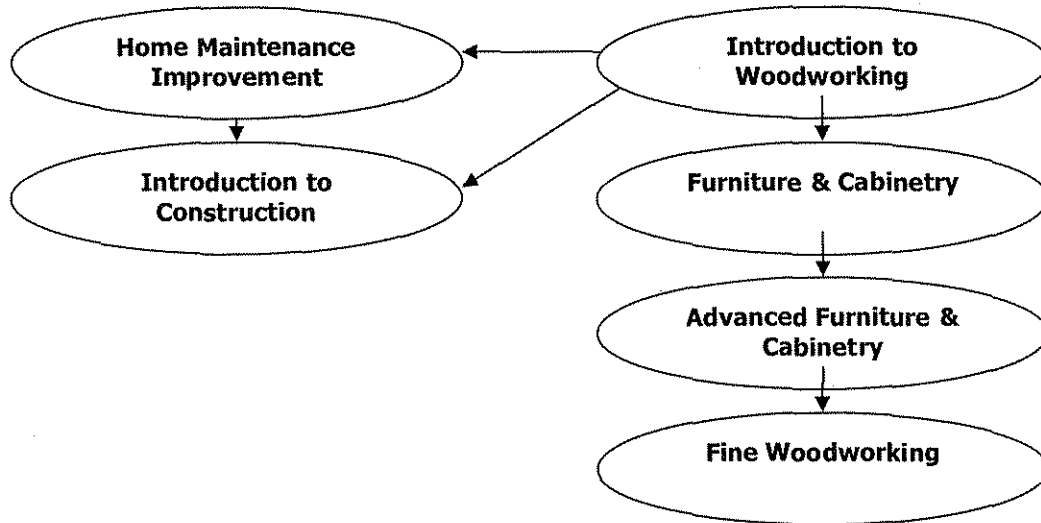
1 credit

School-to-Work
Grades 10-12

Prerequisite: Introduction to Woodworking or Home Maintenance & Improvement

This course is intended for students interested in construction, home building, remodeling, and other building trades. Class activities include project work in carpentry (framing and finishing), electrical, plumbing, drywall, siding, roofing, and HVAC (heating, ventilation, air conditioning). Home repairs and maintenance will also be studied. Students entering the work force after high school as well as students continuing post-secondary education (2 year or 4 year) in the construction field will benefit from this class. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Woods/Construction Course Sequences



| | | | |
|---|--------|------------|--------------------------------|
| <u>Introduction to Engineering – Project Lead The Way</u> | TEC111 | 1 credit | School-to-Work Grade 9-12 |
| Prerequisite: Algebra recommended or currently enrolled | | | |
| This course introduces students to the design process and the tools used in product development. Students will experience first-hand the activities in which engineers engage throughout the design cycle. Development of design briefs, sketching, 3D solid modeling, and prototyping through computer-aided drafting are part of the course. Students will have the opportunity to learn ways in which design techniques apply to many fields such as healthcare, business, art and animation, manufacturing, and engineering. Problem solving and math as it applies to products and services for today's society are emphasized. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. | | | |
| <u>Principles of Engineering – Project Lead The Way</u> | TEC211 | 1 credit | School-to-Work Grade 10-12 |
| Prerequisite: Geometry recommended or currently enrolled | | | |
| Students will experience engineering and design technology and use various technological systems and manufacturing processes that demonstrate ways in which engineers and technicians use math, science and technology to benefit people. This course will be a mix of hands-on and academic activities including computer-aided design projects, research activities, case studies, team product development, and discussions on the social and political consequences of technological change. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. | | | |
| <u>Civil Engineering & Architecture – Project Lead The Way</u> | TEC411 | 1 credit | School-to-Work Grades 10-12 |
| Prerequisite: Geometry recommended or currently enrolled | | | |
| In this class you will learn about Civil Engineering and Architecture, using the design process to solve real world problems and apply your creative skills to hands-on-projects. You will use state-of-the-art software to design residential and commercial buildings. This course covers topics such as the roles of civil engineers and architects, project planning, site planning, building design, project documentation and presentation, and interior design. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. | | | |
| <u>Civil Engineering & Architecture 2</u> | TEC421 | 1 credit | School-to-Work Grades 11-12 |
| Prerequisite: Civil Engineering Architecture | | | |
| This is an Architectural Design class where students design commercial residence units that use advanced structural procedures. You also will design a light commercial building and create a presentation of your project. Units include passive solar systems, foundation, framing, floor plans, elevations, perspectives, site plans, presentation drawings, including walk-through and fly-over movies. You will use state-of-the-art software to design residential and commercial buildings and have an opportunity to have your design work critiqued by a professional architect. Student is responsible for obligations. | | | |
| <u>Computer Media in Technology</u> | TEC850 | 1/2 credit | School-to-Work Grades 9-12 |
| Prerequisite: None – no computer background necessary. All project work is done in class. | | | |
| This is a general course about Computer Multimedia. Students will burn music CD's, make CD labels, take color photographs, print color photographs, use Desktop Publishing, make animations, make movies on the computer as a group, and make Websites with animation and sound. You will be introduced to taking photographs with a digital camera, and use desktop publishing. We will modify sound files, burn music onto CDs, and make CD labels for them. You will create websites with animation, sound, and video. You may choose to do an architectural design or create an invention using 3D software. Create an animation or video game. You will learn procedures for internet research and safer ways to use E-mail and the internet. Some of the time you will work in small groups. Because of the collaborative nature of this course, it is required that you be able to work well with others. Requirement: Responsible for obligations. | | | |
| <u>Consumer Auto</u> | TEC700 | 1/2 credit | School-to-Work Grades 9-12 |
| This course is designed for the student who would like to own and maintain a personal vehicle. The course covers basic car care, under-hood inspection (fluids, belts, hoses), removal and replacement of common parts (wiper blades, bulbs, fuses), cooling system maintenance, battery/charging system diagnosis, lubrication system maintenance, tire information, brake inspection, minor ignition system maintenance (spark plugs, wires, firing order), car buying, car insurance, and service information. Students are responsible for course supplies and materials. | | | |
| <u>Outdoor Power Equipment Technology</u> | TEC750 | 1/2 credit | School-to-Work Grades 9-12 |
| Students will study the theory and operation of two- and four-stroke engines. They will gain hands-on experiences by disassembling, analyzing, and reassembling a small engine. Students will be encouraged to bring in repair projects from home. The course integrates and reinforces basic science principles and mathematical concepts while providing hands-on experiences. Students are responsible for course supplies and materials. | | | |
| <u>Automotive Technology 1 / Engine Systems</u> | TEC760 | 1/2 credit | School-to-Work Grades 9-12 |
| Prerequisite: Consumer Auto or Outdoor Power Equipment Technology | | | |
| Automotive Technology 1 is an introduction to basic engine construction and operation. Students will disassemble an engine to study engine components, operation, testing procedures, and engine trouble diagnosis. Students will study the following automotive engine systems: cooling, lubrication, fuel, electrical, and ignition. Students are responsible for course supplies and materials. | | | |

Automotive Technology 2

TEC511

1 credit

School-to-Work
Grades 10-12

Prerequisite: Automotive Technology 1 / Engine Systems

This course is designed for students interested in entering the automotive profession or gaining a solid foundation of the automotive field. Students will learn how to diagnose and repair electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. The three Cs of auto repair will be emphasized: Concern, Cause, and Correction of system problems. If this course is taken at Memorial, it is considered the first year of the Automotive Youth Apprenticeship Program. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.

Automotive Technology 3

TEC521

1 credit

School-to-Work
Grades 11-12

Prerequisite: Automotive Technology 2

This course is designed for further study of the automotive profession. It is an independent study course that offers further practice with automotive competencies in electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.

Automotive Technology 4 / Advanced Engines

TEC531

1 credit

School-to-Work
Grades 11-12

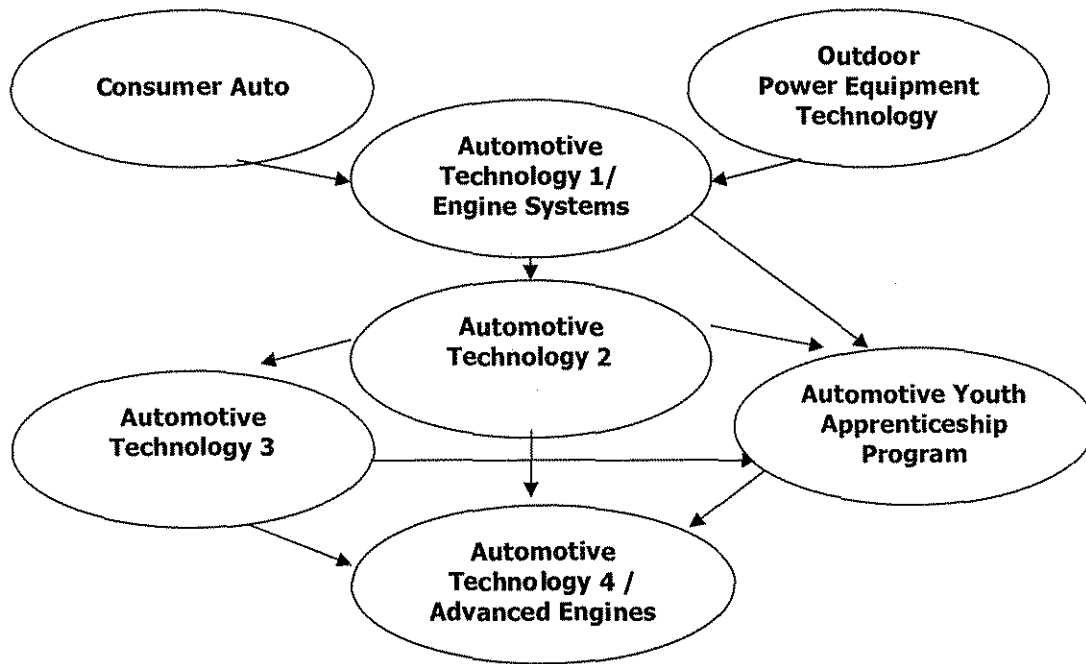
Prerequisite: Automotive Technology 3

This course is designed for further study of the automotive profession. It is the study of and further practice with automotive competencies in engine rebuilding, including engine removal, disassembly, inspection and measurement, cleaning, engine machining, re-assembly, test operation, welding basics, and torch operation. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.



Students interested in a combined class and job placement experience should refer to the Interdepartmental Studies Section of this Curriculum Guide and the Career Internship (STW151) offering.

Transportation Course Sequences



District wide courses that LHS is not offering but available if interested (see your counselor)

| | | |
|--|-----------|--------------------------------|
| <p><u>Aerospace Engineering (Project Lead The Way)</u> Prerequisite: <i>Freshman level science and teacher's signature</i> Recommendation: <i>Physics and Algebra 2 or concurrent enrollment</i> Course offered at: <i>MEMORIAL (see counselor if interested)</i></p> | 1 credit | School-to-Work Grades 11-12 |
| <p>Aerospace is a two-semester advanced level, integrated, project-based science course with an emphasis on the application of the biological, chemical and physical principles inherent in aviation and space studies. Units of instruction include aviation history, aerodynamics, aircraft stability and design, physiology of flight, aerospace materials science, space exploration, and autonomous vehicle design. Most lessons are reinforced through the use of computer technology and software such as Flight Simulator, Inventor, and AERY. Field trips during the year offer the opportunity to pilot single-engine aircraft under the guidance of certified flight instructors and to experience kit built aircraft manufacturing, the EAA museum, and aircraft restoration. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way.</p> | | |
| <p><u>Digital Electronics (Project Lead The Way)</u> Prerequisite: <i>Algebra</i> Course offered at: <i>EAST (see counselor if interested)</i></p> | 1 credit | School-to-Work Grades 10-12 |
| <p>Digital electronics and micro-computers are in every product that is either plugged into a wall or operated by batteries. This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Student is responsible for obligations. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit available.</p> | | |
| <p><u>Computer Integrated Manufacturing (Project Lead The Way)</u></p> | 1 credit | School-to-Work Grades 11-12 |
| <p>Prerequisite: <i>Completion of Introduction to Engineering and Principles of Engineering with a passing grade OR completion of Metals Manufacturing 1 and Metals Manufacturing 2 with a passing grade.</i></p> | | |
| <p>Course offered at: <i>EAST (see counselor if interested)</i></p> | | |
| <p>Students will take the three-dimensional modeling skills they learned in <i>Introduction to Engineering</i> and combine them with the building and manufacturing processes learned in <i>Principles of Engineering</i> to a whole new level that includes rapid prototyping and using a three-dimensional printer. Using Autodesk Inventor and other computer programs, students will create actual models and prototypes with Computer-Numeric-Control machines, robotic arms and automated manufacturing. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.</p> | | |
| <p><u>Engineering Design and Development (Project Lead The Way)</u></p> | 1 credit | School-to-Work Grade 12 |
| <p>Prerequisite: <i>At least one Project Lead The Way course and teacher's signature</i></p> | | |
| <p>Course offered at: <i>MEMORIAL (see counselor if interested)</i></p> | | |
| <p>Engineering Design & Development is the capstone research and development course for all of the engineering courses. Engineering Design and Development is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in the preceding engineering course(s) and are guided by the teacher and community mentor / professional engineers. At the end of the course, students must submit a final written report and defend their solutions to a panel of outside reviewers. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.</p> | | |
| <p><u>Automotive Youth Apprenticeship Program</u></p> | 2 credits | School-to-Work Grades 11-12 |
| <p>Prerequisite: <i>On track for high school graduation, Automotive Technology 1 / Engine Systems.</i></p> | | |
| <p>Course offered at: <i>MEMORIAL (see counselor if interested)</i></p> | | |
| <p>Automotive Youth Apprenticeship (YA) is a rigorous two-year elective program for high school juniors and seniors that combine academic and technical classroom instruction with mentored on-the-job learning. This statewide program gives students the opportunity to experience a career while still in high school. Students attend Memorial High School for the first period of the day during the first year of the Youth Apprenticeship program. Second year students continue courses at Madison Area Technical College. Please see your counselor and your automotive teacher if you are interested in this program. Student is responsible for transportations and other course supplies and materials.</p> | | |

Madison Memorial High School



**Program of Studies
2010-2011**

BUSINESS & INFORMATION TECHNOLOGY



When making course selections, you should be very aware of the tremendous employment opportunities in the many business-related fields. Students who have taken business courses simply have a greater ability to get better, higher-paying jobs over the short-term and long-term in comparison to students who have not taken advantage of these curriculum offerings.

1. The quarter-credit course structure makes it easier for you to receive computer instruction specific to your individual interests. See the courses listed with the logo displayed at the left.
2. An A.P. Accounting pilot curriculum is available in coordination with the Wisconsin Department of Public Instruction beginning in the 2009-2010 school year. Contact Mr. Thomas for additional information about this new curriculum offering. No prerequisite is required, however, the Accounting for Dual Transcribed Credit course is recommended.
3. The INTERNATIONAL BUSINESS COURSE is an exciting opportunity for students. This course helps prepare you for the challenges that you face in applying business concepts to a rapidly changing global economy. A vast number of resources are available within our building and community to prepare you for your future travels.
4. If you plan on majoring in Business, you need to take Accounting, Business Law, International Business and Personal Finance to prepare yourself for the challenging curriculum at the university level. You are fortunate that you have a strong choice of nationally recognized business schools available in Wisconsin.
5. Advanced Standing at MATC is available for courses in Accounting, Keyboarding, and the Microsoft Office Suite (designated with an "AS" notation). The College Level Examination Program (CLEP) is available in the areas of Accounting and Law. A Dual Transcribed Credit course is available in Microsoft Excel, Hardware/Software Essentials, and Accounting which is granted at no cost to students through an annual articulation renewal with MATC.
6. You may elect either a letter grade or pass/fail with a C average in any computer course by meeting minimum course requirements as identified in the course description.
7. For more information, please see <http://memorialweb.madison.k12.wi.us/business> or contact one of the following instructors:
Dave Thomas (office phone: 442-2231) dmthomas2@madison.k12.wi.us
Sacia Wheeler (office phone: 442-2232) spieper@madison.k12.wi.us

**Introduction to
Business Careers**

BUS 113

½ Credit

Elective 9, 10, 11

Prerequisite: None

This is an introductory course that previews many business-related fields, careers and new technologies used in businesses today. It explores the potential job market and employment opportunities available in businesses. The Internet is used to explore and research various employment opportunities and the necessary job qualifications.

**Keyboarding/
Adv Keyboarding**

BUS 210

1 Credit

Elective 9, 10, 11, 12

Prerequisite: None

If after reading the course description of Keyboarding and Adv Keyboarding, you wish to take both courses, sign up for BUS 210.

Keyboarding

BUS 213

½ Credit

Elective 9, 10, 11, 12

Offered: 1st and 2nd semester

Prerequisite: None

The beginning of this course helps you master touch operation of the keyboard, and develop correct key stroking techniques. Students also become efficient computer users as they apply keyboarding skills as they learn basic document formatting of memos, letters, reports, and tables related to high school and career requirements. **THIS IS AN INTRODUCTORY COURSE.** You may elect a letter grade or pass/fail.

Adv Keyboarding

BUS 223

½ Credit

Elective 9, 10, 11, 12

Offered: 1st and 2nd semester

Prerequisite: Keyboarding or instructor consent

In this continuation of the Keyboarding course, the primary focus is on increasing keyboarding speed and accuracy, the formatting of college level documents such as personal and business letters, reports, and agendas with tables. Emphasis is also given to proofreading, spelling, punctuation, basic grammar, numbers, symbols, and the continued development of keyboarding speed and accuracy. You will also be introduced to voice-recognition software. You may elect a letter grade or pass/fail. For instructor consent, please contact spieper@madison.k12.wi.us if there is a desire to test out of the keyboarding prerequisite.

INFORMATION TECHNOLOGY:

Computer Hardware/ Software Essentials

BUS 133

½ Credit

Elective 9, 10, 11, 12

Prerequisite: None

This course presents an in-depth exposure to Personal Computer (PC) hardware and operating systems. Students learn the functionality of hardware components as well as suggested best practices for safely maintaining and repairing PC's. Through hands on activities and labs, students learn how to assemble and configure a computer, install and work with an operating system, connect up to a network, and troubleshoot computer hardware and software problems using a variety of diagnostics. This course prepares students for CompTIA's A+ Essentials exam and is the equivalent of the first course in the Information Technology programs at Madison Area Technical College. Students can take this course for Transcribed Credit with MATC as well as receiving high school credit.

Microsoft Office Suite

BUS 310

1 Credit

Elective 9, 10, 11, 12

Prerequisite: None

This course provides a full year of computer instruction in Word, Excel, Access, and PowerPoint. See the individual course descriptions below for more details about each program

The following computer courses meet for one semester and incorporate two quarter credit courses of the computer topics represented by the computer logo. Each topic is taught over a 9-week quarter.

BUS 330 Word (AS) and Excel (AS)

BUS 340 Access (AS) and PowerPoint (AS)

BUS 350 PowerPoint (AS) and Web Development & Email Systems

BUS 360 Web 2.0--21st Century Literacies and Adobe Dreamweaver

Word (AS)

¼ Credit

Elective 9, 10, 11, 12



Prerequisite: None

Microsoft Word is a full-featured word processing program that allows you to create and revise professional looking documents. Word has many features designed to simplify the production of documents; these features are introduced through the following units: 1) creating and editing a document; 2) creating a research paper; 3) creating a resume and cover letter; 4) creating a document with a table, chart, and watermark; 5) generating form letters, mailing labels, envelopes, and directories; 6) creating a professional newsletter. This course may be taken for pass/fail credit.

Excel (AS)**¼ Credit****Elective 9, 10, 11, 12**

Prerequisite: None

Microsoft Excel is a powerful spreadsheet program that allows you to organize numeric data, complete calculations, graph data, make decisions, develop professional looking reports, and import real-time data from the Internet. Your experience with Excel consists of the following units: 1) worksheet and embedded chart; 2) formulas, functions, formatting, and web queries; 3) what-if analysis, charting, and working with large worksheets; 4) financial functions, data table, amortization schedules, and hyperlinks; 5) creating, sorting, and querying a worksheet database; 6) working with multiple worksheets in workbooks. This course may be taken for pass/fail credit.

Access (AS)**¼ Credit****Elective 9, 10, 11, 12**

Prerequisite: None

Microsoft Access is a database management system that allows you to create and process data. Many people unknowingly access database information each day when visiting the library, school resources, and internet resources to name a few. Learn more about how these database management systems are setup to service your everyday needs. Your experience with Access consists of the following units: 1) creating a database; 2) querying a database 3) maintaining a database 4) developing reports, forms, and combo boxes; 5) enhancing forms with object linking and embedding fields, hyperlinks, and subforms; 6) creating an application system using macros, wizards, and the switchboard manager. This course may be taken for pass/fail credit.

PowerPoint (AS)**¼ Credit****Elective 9, 10, 11, 12**

Prerequisite: None

Microsoft PowerPoint is a presentation graphics program that allows you to produce professional looking interactive audio/visual presentations. PowerPoint allows you the flexibility to make presentations using a data projector attached to a computer system, develop overhead transparencies with handouts, take advantage of the World Wide Web to run virtual presentations over the Internet, and convert presentations into a DVD format. This course may be taken for pass/fail credit.

**Web
Development &
Email Systems****¼ Credit****Elective 9, 10, 11, 12**

Prerequisite: None

This class is a starting point for users seeking to understand the complexities of creating web pages and using an email system. You develop a greater historical understanding of the global expansion and legal concepts that surround the Internet. You gain experience developing web sites using a variety of approaches that include the following: (1) integration of application-based web tools; (2) use of commercial user-friendly web development applications; (3) and a brief introduction to web-based programming that leads you to other courses in the field of computer science. You also gain experience using a variety of features that are practical and useful in association with personal email systems. This course may be taken for pass/fail credit.

**FrontPage Web Page Design
(Microsoft)**

¼ Credit

Elective 9, 10, 11, 12



Prerequisite: None – This course will not be offered for the 2010 – 2011 school year. This course is an introduction to web page design concepts using FrontPage web-authoring software. FrontPage provides the professional design, authoring, data, and publishing tools needed to create dynamic and sophisticated web sites. FrontPage is used to create interactive websites with graphics, animations and components; use tables, frames, forms and templates to enhance web pages; and publish a functional website. This course may be taken for pass/fail credit.

**Web2.0--21st Century Literacies
(Social Networking, Youtube, Wikis & more)**

¼ Credit

Elective 9, 10, 11, 12



YOU ARE A 21ST CENTURY LEARNER, LEVERAGE THE POWER OF THE WEB & APPLY IT TO YOUR ACADEMIC LIVES.
Innovation continues to occur on the internet faster than most can keep pace. This course is designed to directly address the use of technology in the classroom and help students become proficient with a suite of applications and model skills that will help them be better 21st century students. Some of the Web 2.0" technologies covered in this course include: social networking (ex. Facebook), YouTube, wikis, blogs, RSS, smartphones, social bookmarking tools, photo sharing tools, mapping tools, audio and video podcasts, screencasts and everything Google. **Leverage the power of the web! You will blog, collaborate, navigate, analyze, question, think, create, connect and learn! Are you ready?**

Adobe Dreamweaver

¼ Credit

Elective 9, 10, 11, 12



Prerequisite: none
Through this course you will learn about Adobe Dreamweaver by completing projects that provide countless tips and techniques to help you become more productive with the program. Design, develop, and maintain standards-based websites and applications. Build world-class websites and applications with one of the industry's leading web authorizing tools. Adobe®. Dreamweaver software is ideal for web designers, web developers, and visual designers. Your experience with Dreamweaver consists of the following units: Creating a Dreamweaver Web Page and Local Site; Adding Web Pages, Links, and Images; Tables and Page Layout; Forms; Templates and Style Sheets; Layers, Image Maps, and Navigation Bars; Animation and Behaviors; Media Objects; Page Layout with Frames & Dreamweaver Web Photo Album.

**Personal
Finance**

BUS 403

½ Credit

Elective 10, 11, 12

Prerequisite: None

Personal finance is one of the most useful classes a high school student can take in order to prepare for their future. This one-semester class will teach students: how to prepare themselves for the job market, how taxes impact their lives, how to create and use a budget, how to build wealth, the pros and cons of home ownership versus renting, how credit can be both your best friend and your worst enemy, how financial institutions work, and about the different types of insurance. Students will also learn about investing in stocks, bonds, and mutual funds, as well as how to save money and why it is important to save money. Don't be left at a disadvantage in life due to a lack of basic financial knowledge. A Wisconsin state sponsored Youth Apprenticeship program is available in the area of finance. You may also see your building internship coordinator for potential career employment opportunities. ALL STUDENTS WILL PARTICIPATE AT NO COST IN THE National Financial Literacy Challenge, an initiative recommended by the President's Advisory Council on Financial Literacy.

**Introduction to
Accounting Concepts**

BUS 413

½ Credit

Elective 9, 10

Prerequisite: None

Start learning the international language of business. Many of the same topics taught in the Personal Finance course will be covered from the business perspective. Students will acquire a better understanding about how accounting is tied to a diverse field of careers. Having an accounting background gives students access to a future with 360 degrees of possibilities. Every business in our society is directly impacted by accounting based decisions. All employees are being asked to better understand the fiscal responsibilities and roles associated with the arts, medical, environmental, entertainment, criminal, as well as many additional career areas. By participating in this course, students will have a better understanding of the role that accounting has in our society. Students will be better prepared to succeed in future accounting courses, other business courses, and potentially other educational opportunities.

**Accounting for
Dual Transcribed Credit**

BUS 420

1 Credit

Elective 11, 12

Prerequisite: Instructor Approval Required

This course is designed to help you understand basic accounting principles and procedures. Objectives include preparation for: (1) an accounting career or any business-related field and (2) using accounting in your everyday life. Major concepts include: recording perpetual business transactions, determining a business profit or loss, preparing financial reports and budgets, and analyzing financial statements for personal and business decisions. Students enrolled in this course will be eligible to receive college transcribed credit pending an MMUSD and a Wisconsin technical college annually reaching and fulfilling an agreement on course curriculum, teacher requirements, textbooks, etc. Students will generally know in the first quarter whether transcribed credit is planned to be available for students with a B or better in the course. A Wisconsin state-sponsored Youth Apprenticeship program is available in the area of finance.

| | | | |
|--|--|-----------------|------------------------|
| AP Accounting | BUS 430 | 1 Credit | Elective 11, 12 |
| | Prerequisite: none | | |
| | Recommended: Accounting for Dual Transcribed Credit | | |
| | This new curriculum is a pilot offering in coordination with the Department of Public Instruction and numerous other states. As a pilot, the AP test and college agreements are still under development. College Level Examination Programs (CLEP) are currently available at four-year universities for Accounting. This course has been developed to match the accounting competencies at the university level. Students that may benefit most from this course may be non-accounting majors or students desiring to minor in business who are required to take at least one college level accounting course. | | |
| Business & Personal Law 1 & 2 | BUS 440 | 1 Credit | Elective 11, 12 |
| | Prerequisite: None | | |
| | If after reading the course description of Business and Personal Law 1 & 2, you wish to take both courses, sign up for BUS 440. | | |
| Business & Personal Law 1 | BUS 441 | ½ Credit | Elective 11, 12 |
| | Offered 1st semester | | |
| | Prerequisite: None | | |
| | The first semester of the course is designed to give you a background into how laws affect you and your everyday actions, with an emphasis on increasing your legal knowledge and awareness. This involves two major areas of law: Criminal and Civil Law . These two areas are presented in terms of how crimes and interference with your personal and property rights (civil law) affect you directly and how they have a spiraling effect on society and business. This course makes you aware of your legal rights, remedies, and obligations. You may elect a letter grade or pass/fail. | | |
| Business & Personal Law 2 | BUS 442 | ½ Credit | Elective 11, 12 |
| | Offered: 2nd semester | | |
| | Prerequisite: None | | |
| | This second semester law course provides an in-depth study from both a business and personal point of view of the legal areas of the following topics: (a) Contract Law - to include specific study of sales contracts, warranty contracts, apartment lease contracts, contracts of employment and automobile purchase contracts. (b) Consumer Law - to include specific study of consumers' legal rights and remedies in various legal situations such as defective products, personal injuries, deceptive selling and advertising practices, and the appropriate agencies to use for consumer assistance. You may elect a letter grade or pass/fail. | | |

| | | | |
|---------------------------------|--|-----------------|-------------------------------|
| International Business | BUS 453 | ½ Credit | Elective 10, 11, 12 |
| | Prerequisite: None | | |
| | This course provides you with the opportunity to reflect on various business issues as they relate to your academic studies in world languages and social studies. This is a program for developing full participation and responsibility in our worldwide society, promoting social, cultural, political, economic, and ecological awareness. You have the opportunity to focus your studies on a region of interest such as Asia, Latin America, or Europe. | | |
| Medical Office Assistant | BUS 463 | ½ Credit | Elective 9, 10, 11, 12 |
| | Prerequisite: Keyboarding or instructor approval | | |
| | This inter-departmental course is team-taught by the Family and Consumer Education and Business Education Department. You spend one quarter in each department and may select the program by signing up for BUS 463 or FCS 463. | | |
| | This course is for anyone interested in a health care career that does not involve direct patient care. It prepares you for work in office settings for an individual doctor, clinic, hospital, or long-term care agency. Career opportunities also extend to employment wherever knowledge of medical terminology, professional procedures, and ethics is required such as public health, insurance companies, etc. Topics include the medical office, the application of technology and computers in healthcare, medical records and transcription, insurance and coding, related medical terminology, communication and organizational skills, professionalism, and career studies. | | |
| Desktop Publishing | BUS 470 | 1 Credit | Elective 9, 10, 11, 12 |
| | Prerequisite: None | | |
| | BE A PART OF MEMORIAL HIGH SCHOOL'S YEARBOOK AND/OR NEWSPAPER STAFF. This course is driven by student decision making along with rigorous curriculum to learn industry standard software packages, production processes, and deadline achievement. The focus is producing a quality publication for the student body. Students learn to write concise body copy/captions, understand color printing theory, develop photographic composition, design layouts using modern dynamic concepts, and are introduced to advertising concepts to make their publication a success. This course is great for those students who work well independently and within a team environment. Independent projects will allow students to identify specific works of interest while creating a portfolio of real-world projects that may incorporate event programs, newsletters, and other school related publications. A major student goal is to obtain skills that are beneficial and align with potential job goals while building interpersonal skills that are socially advantageous. | | |

Business, Information Technology, and Career Skills

BUS 510

1 Credit

Elective 11, 12

Prerequisite: Students are expected to be currently employed or seeking future employment **YOU'RE HIRED!** Words everyone wants to hear when interviewing. This course is especially valuable for anyone interested in a business career. Units covered include desktop publishing, multimedia presentations, internet usage, records management, telecommunications, international business, banking, human relations and further skill development with computer-based technologies. This project-oriented course stresses a business-like atmosphere concluding with a unit on managing and running your own business. **NOTE: This cooperative school/work course must be taken concurrently with Business and Career Internship – BUS 520.**

Business and Career Internship

BUS 520

1 Credit

Elective 11, 12

Prerequisite: Students must complete a program application and interview **GET PAID, RECEIVE CREDIT AND GAIN EXPERIENCE!** Learn while you earn by linking your classroom knowledge to paid employment in a business environment in the Madison area. Build decision making and leadership skills while applying classroom knowledge in a real business setting. You may be employed in areas relating to Accounting, Business Support Services, Finance, Information Technology, Law, Marketing, and Real Estate to name a few. Students that have employment interests outside the business area will be interviewed by instructors to determine career interests and suitable entry level opportunities. These are employment opportunities students would have difficulty securing on their own. At the completion of the course and 180 on-the-job-hours, you will be awarded a State Certified Employability Skills Certificate. This course may be scheduled outside the regular school day, providing you with a method for earning 2 credits for one period of classroom instruction. **NOTE: This cooperative school/work course must be taken concurrently with Business, Information Technology, and Career Skills (BUS510).**

COMPUTER SCIENCE (see <http://memorialweb.madison.k12.wi.us/business> for additional details about these course offerings)

| | | | |
|---|---|-----------------|-------------------------------|
| Introduction to Programming | CMP 110 | 1 Credit | Elective 9, 10, 11, 12 |
| | Suggested: Web Development & Email Systems Prerequisite: none This is the entry level course for anyone wishing to learn to write and run computer programs. No previous programming experience is necessary; however, you are expected to have a basic knowledge of graphic user interfaces. You learn how to program in JAVA over the course of two semesters, with an introduction to advanced software engineering techniques in different programming environments. A final project is done at the end of the year. | | |
| Computer Science A AP | CMP 120 | 1 Credit | Elective 10, 11, 12 |
| | Prerequisite: Introduction to Programming or teacher's signature This course emphasizes structured program design and object-oriented software engineering, using the Java programming language. You have the opportunity to take the AP Computer Science exam in the spring. The class progresses through to advanced programming techniques, with a final project at the end of the year. More information is available at: http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html | | |
| Computer Hardware/ Software Essentials | CMP 133 | ½ Credit | Elective 9, 10, 11, 12 |
| | Prerequisite: None This course presents an in-depth exposure to Personal Computer (PC) hardware and operating systems. Students learn the functionality of hardware components as well as suggested best practices for safely maintaining and repairing PC's. Through hands on activities and labs, students learn how to assemble and configure a computer, install and work with an operating system, connect up to a network, and troubleshoot computer hardware and software problems using a variety of diagnostics. This course prepares students for CompTIA's A+ Essentials exam and is the equivalent of the first course in the Information Technology programs at Madison Area Technical College. Students can take this course for Transcribed Credit with MATC as well as receiving high school credit. | | |

MARKETING

Advanced Standing credits may be granted by MATC. Check with your instructor.

Marketing **MRK 110** **1 Credit** **Elective 10, 11, 12**



Prerequisite: None

You learn about marketing, retailing, and service activities. Topics include marketing, free enterprise, selling, loss prevention, visual merchandising, advertising, and career management. Activities include small group discussions, guest speakers, and hands-on projects. Upon completion of the course you should be qualified for an entry-level position in business or continuation into a college marketing/business program.

Starting Your Own Business **MRK 123** **½ Credit** **Elective 10, 11, 12**



Prerequisite: None

Have you thought about starting your own business? Would you like to learn the steps in creating a small business or write your own business plan and present it to business owners? Learn about developing your business idea, location, marketing, financing, managing people, and legal guidelines. You will practice business and economic principles in this interactive course that will take you beyond the school building and into the business community. This is a great course for college-bound students pursuing business or marketing or students thinking about opening a business right after high school. The course is team taught with community, business, and government leaders through the Business & Education Partnership and Junior Achievement.

Marketing Management **MRK 130** **1 Credit** **Elective 12**



Prerequisite: Marketing and teacher's signature

Taken with Marketing Internship, this course gives special attention to human relations, sales promotion, and management. Emphasis is on topics relating to marketing research, entrepreneurship, human relations, and sports/entertainment. The course is offered for anyone interested in sales, marketing, and business management.

Marketing Internship **MRK 140** **1 Credit** **Elective 12**



Prerequisite: Marketing and teacher's signature

Taken with Marketing Management, this course involves you in employment and supervision by a cooperating business firm, according to an organized training program related to your career interests. You work a minimum of 10-15 hours per week to gain experience in areas such as specialty stores, department stores, financial services, hotels/motels, sports products, service businesses, and other marketing occupations. You are employed with the assistance of the instructor and must provide your own transportation to the place of employment.

**Sport &
Entertainment
Marketing**

MRK 153

½ Credit

Elective 10, 11, 12



Prerequisite: None

Billions of dollars are spent each year on sports and other forms of entertainment. This fascinating service area is a growing industry, which employs athletes, musicians, stage crew, advertising agents, promotion agents, personal attendants, sports agents, even planners, and numerous other related professionals. The purpose of this course is to provide students with the fundamental principles and concepts identified with sports and entertainment marketing, and to develop critical thinking and decision-making skills through the application of sports and entertainment marketing principles in these industries. Classroom instruction will be reinforced through the use of outside guest speakers, case studies, field trip experiences, job shadowing, current periodicals, computers, in-house projects, and constructive/discovery learning.

FAMILY AND CONSUMER SCIENCES

Do you want exposure to real-life experiences that prepare you for global diversity beyond the school walls? Do you want to practice skills that focus on improving relationships and working with people? Welcome to Family and Consumer Sciences (FCS). FCS is a department that offers unique courses and hands-on activities. FCS provides opportunities for leadership development and advanced standing within business and the community in the following industries:

- Child Care and Education
- Culinary Arts
- Family/Community Service
- Health Care
- Hospitality and Entertainment
- Retail/Merchandising

| | | | |
|---|----------------|---|-------------------------------|
| Culinary Basics | FCS 113 | ½ Credit | Elective 9, 10, 11, 12 |
| Prerequisite: None Learn basic food preparation and good nutrition. Topics also include healthy food selection and diet, microwave cooking, basic food preparation, introduction to equipment, menu planning, and table service. | | | |
| International Cuisine | FCS 123 | ½ Credit | Elective 9, 10, 11, 12 |
| Prerequisite: None Sample food and culture around the world cooking international cuisine. Explore geographical regions and ethnic cuisine. | | | |
| Gourmet Chef 1 & 2 ProStart | FCS 130 | 1Credit | Elective 10, 11, 12 |
| Prerequisite: One year of Science and Algebra 1 Elect both semesters. Streamline your study of culinary arts by taking Gourmet Chef ProStart all year long. We accommodate vegetarians. | | | |
| Gourmet Chef 1 ProStart | FCS 131 | ½ Credit (1st semester) | Elective 10, 11, 12 |
| Prerequisite: One year of Science and Algebra 1 Turn and interest in foods into an art or an occupation. Practice cooking techniques that include stone-baked pizzas, appetizers, egg cookery I, breakfast foods, desserts, pastries, sandwiches, poultry/meats, and herbs/spices. Capstone projects include seasonal gourmet buffets and catered school events. Affiliation with the National Restaurant Association and ProStart instructor, offers a variety of scholarships and entry into culinary competitions. We accommodate vegetarians. | | | |

Gourmet Chef 2 ProStart **FCS 132** **½ Credit (2nd semester) Elective 10, 11, 12**

Prerequisite: One year of Science and Algebra 1

Sharpen your culinary skills preparing restaurant quality cuisine. Fine tune your sense of flavor. Cooking techniques include cake decorating, stone-baked artisan yeast breads, salads, soups, sauces, poultry/meats, and side dishes. Capstone projects include seasonal buffets and catered school events. You learn from demonstrations by guest speakers and a field trip to local gourmet businesses. We accommodate vegetarians.

Family Life Ed - Child Development **FCS 210** **1 Credit** **Elective 10, 11, 12**

Prerequisite: Sophomore status is REQUIRED by the Department of Public Instruction for ACCT certificate

1st Semester

Family Life tackles communication skills, relationship choices, human sexuality issues, family crisis, pregnancy/birth and the newborn, personal finance, and many other interesting real life issues. This class has many hands on opportunities, including the option to be a part of a three-day parenting simulation with "Baby Think It Over."

2nd Semester

In Child Development you study the child from 1-5 years of age. The class operates a play school for 5 weeks in which each student is expected to observe and teach preschoolers.

You may earn the Assistant Child Care Teacher (ACCT) certificate through Family Life/Child Development if you meet grade and attendance requirements. This certificate, issued by the Dept of Public Instruction (DPI), allows you to work in child care centers at 17 instead of 18 years of age. Seniors may earn credit for this paid work experience through JMM Internship.

The ACCT may entitle you to 3 elective credits at MATC if you meet grade and attendance requirements.

Seniors who are 17 and who have already acquired the ACCT may receive the second-level Department of Health & Family Services employment designation as a child care teacher. You may enroll in JMM Employment Study and JMM Internship and will be placed in an area child care center, where you will work and be paid while completing the State Skills in Child Services.

Community Studies **FCS 223** **½ Credit** **Elective 11, 12**

Prerequisite: Junior or Senior

Prepare for leadership roles in schools, the community and as future teachers. Be a positive role model and interact with younger kids. Teaching teams are trained to deliver a drug and alcohol prevention curriculum, create fun, hands-on educational activities, and become peer educators for sixth graders. Project Aware is an exciting collaboration between Toki, Jefferson, and Spring Harbor Middle schools. Experience the impact of a teaching career.

Fashion Design **FCS 233** **½ Credit** **Elective 9, 10, 11, 12**

Prerequisite: None
 Fashion design is a highly technical industry, requiring great attention to detail, patience and ability to work as a team. Students will study textiles and fabrics, research and understand designers and trends, and design and construct patterns. In addition, students will learn and improve upon sewing and fabric construction skills while working on garment and accessory projects such as handbag/tote, scarves, hats, skirts, and dresses.

There will be a lab fee of \$20 for this course and certain fabrics will cost an additional fee.

JMM Employment **FCS 310** **1 Credit** **Elective 12**

Prerequisite: Senior
 Polish the communication skills and personal marketing strategies required for successful career entry. Guest speakers, field trips, school, community, and global service projects provide hands-on activities for you to network with professionals.
 JMM Employment must be taken concurrently with JMM Internship. (See below).

JMM Internship **FCS 320** **1 Credit** **Elective 12**

Prerequisite: Senior
 Earn while you learn! Work a minimum of 15 hours per week in a job chosen by you and earn credit. You are employed, paid and trained by a cooperating business in an entry-level position related to your career interest(s). Gain valuable professional work-experience as you prepare for life after high school. JMM Internship must be taken concurrently with JMM Employment. (See above).

Enrollment in either Health Science Occupations 1 or 2 and/or interest in a health-related career allow you to become a member of Health Occupations Students of America (HOSA), a national organization committed to providing leadership training, service work, and competitive events to test healthcare knowledge and skills at state and national conferences.

Health Science Occupations 1 & 2 **FCS 410** **1 Credit** **Elective 10, 11, 12**

If after reading the course description of Health Science Occupations 1 & 2, you wish to take both courses, sign up for FCE 410.

Health Science Occupations 1 **FCS 411** **½ Credit** **Elective 10, 11, 12**

Prerequisite: None
 If you are considering a medical or health career, this semester course explores the 300 occupations in this field to see the ones you may be best suited for. You study health care trends, medical terminology, infection and disease control, legal issues, medical ethics, and the use of technology in health care.

| | | | |
|---|--|-----------------|-------------------------------|
| Health Science Occupations 2 | FCS 412 | ½ Credit | Elective 10, 11, 12 |
| | <p>Prerequisite: Health Science Occupations 1</p> <p>Hands-on activities, including CPR and First Aid (for certification if desired), body mechanics and patient transport, reporting, charting, etc., give you a sampling of the tools and skills required in health care careers, as well as help you become a better consumer of health care information, products, and services. You study safety issues, medical terminology, basic physiology and anatomy, therapeutic diets, communication issues dealing with the aged, disabled, or terminally ill, and job-seeking skills. Lab fee \$10 for CPR training materials.</p> | | |
| Nursing Assistant | FCS 423 | ¾ Credit | Elective 11, 12 |
| | <p>Prerequisite: Successful completion of Health Science Occupations or instructor signature required. This course is recommended for students 16 years old and above.</p> <p>This course is team taught by a vocationally certified teacher and a registered nurse. Students learn and apply care giving skills in lab and professional settings. Students seeking employment in any health care field will find this a valuable first step! Nursing Assistant is a pre-requisite to all Wisconsin Technical College System nursing programs and highly regarded in 4-year college admissions. Units of study and skills include: human development, infection control, patient transfer, health and disease, personal care and hygiene, nutrition, and special care.</p> <p>To meet certification requirements, students must complete clinical experiences in a local health care agency arranged by the teacher, maintain a grade of 75% or better, and meet attendance requirements. The high school is not responsible for transportation. A medical checkup, TB skin tests, successful background check, and \$115 certification test fee are required. Class meets for additional hours of lab and clinical time on weekends, evenings, and/or breaks.</p> | | |
| Medical Office Assistant | FCS 463 | ½ Credit | Elective 9, 10, 11, 12 |
| | <p>Prerequisite: Keyboarding or instructor approval</p> <p>This inter-departmental course is team-taught by the Family and Consumer Education and Business Education Department. You spend one quarter in each department and may select the program by signing up for FCE 463 or BUS 463.</p> <p>This course is for anyone interested in a health care career that does not involve direct patient care. It prepares you for work in office settings for an individual doctor, clinic, hospital, or long-term care agency. Career opportunities also extend to employment wherever knowledge of medical terminology, professional procedures, and ethics is required such as public health, insurance companies, etc. Topics include the medical office, the application of technology and computers in healthcare, medical records and transcription, insurance and coding, related medical terminology, communication and organizational skills, professionalism, and career studies.</p> | | |

TECHNOLOGY AND ENGINEERING

You are encouraged to elect courses from this department to better prepare yourself for life in our high-tech world. Technology and Engineering at Memorial emphasizes design, manufacturing, and transportation. You frequently work with equipment and materials in a lab environment. Appropriate safety rules are followed.

Intro to Woodworking & Furniture & Cabinetry **TEC 110** **1 Credit** **Elective 9, 10, 11, 12**

If after reading the course description of Intro to Woodworking and, Furniture and Cabinetry you wish to take both courses, sign up for TEC 110.

Introduction to Woodworking (WoodLINKS) **TEC 113** **½ Credit** **Elective 9, 10, 11, 12**

Prerequisite: None

In this hands-on course students will learn modern woodworking skills by building useful projects. The curriculum focuses on standard woodworking procedures, properties of wood, accurate measurement, and the safe use of hand and power tools. At the end of the semester, successful students take home attractive projects and many new skills. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Furniture and Cabinetry (WoodLINKS) **TEC 123** **½ Credit** **Elective 9, 10, 11, 12**

Prerequisite: Introduction to Woodworking

This course is a continuation of *Introduction to Woodworking*. Students will learn additional advanced skills related to cabinet making and architectural woodworking. Areas of study include: safety, wood material technology, woodworking design, project planning, woodworking machine operation, finishing methods and techniques, industry standards, and customizing. Students will also explore career opportunities and ways that woodworking applies to daily lives. Students will work independently or in groups to complete at least one major project. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Advanced Furniture And Cabinetry (WoodLINKS) **TEC 130** **1 Credit** **Elective 10, 11, 12**

Prerequisite: Furniture and Cabinetry

This course is the advanced study of wood product processing. Topics include: safety, project planning, design and understanding procedures, and using jigs and fixtures in woodworking. Areas of exploration include veneering, CNC technology and curved and circular work. There are assigned projects with additional time available for student-selected projects. Examples of projects include: shaker style furniture, cabinets, functional student furniture, and tables. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

**Fine Woodworking
(WoodLINKS)**

TEC140

1 Credit

Elective 11, 12

Prerequisite: Advanced Furniture and Cabinetry

This course is the advanced study of wood product processing. Emphasis is on the production process, including project planning, designing, presenting, understanding procedures, and the use of jigs and fixtures in woodworking. Students explore related careers through assigned or student selected projects. Students research processes and materials for their projects. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

**Introduction to
Construction (WoodLINKS)**

TEC 150

1 Credit

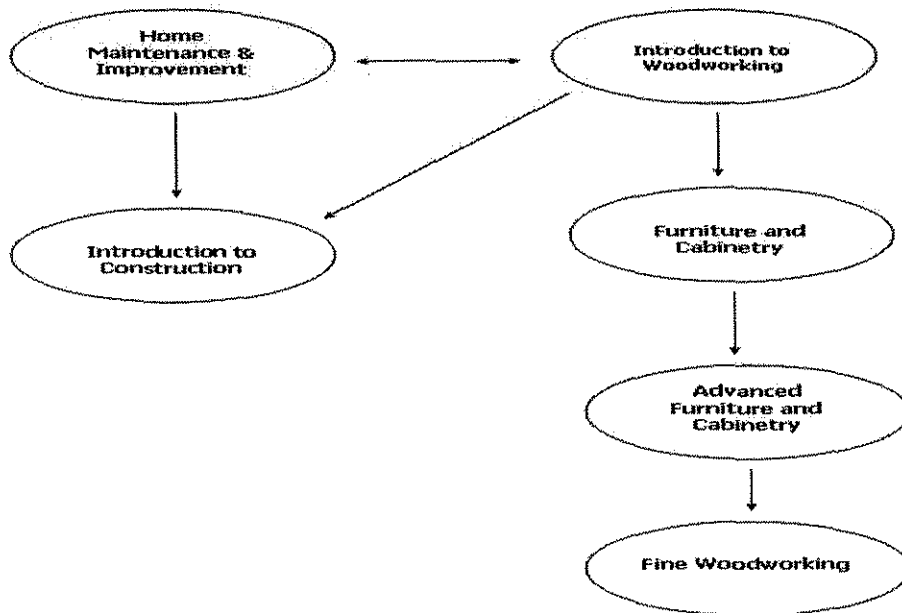
Elective 10, 11, 12

Prerequisite: Introduction to Woodworking or Home Maintenance & Improvement

This course is intended for students interested in construction, home building, remodeling, and other building trades. Class activities include project work in carpentry (framing and finishing), electrical, plumbing, drywall, siding, roofing, and HVAC (heating, ventilation, air conditioning). Home repairs and maintenance will also be studied. Students entering the work force after high school as well as students continuing post-secondary education (2 year or 4 year) in the construction field will benefit from this class. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

This course is offered at: East, La Follette, West. See your counselor if interested.

Woods/Construction Course Sequences



Consumer Auto

TEC 213

½ Credit

Elective 9, 10, 11, 12

Prerequisite: None

This course is designed for the student who would like to own and maintain a personal vehicle. The course covers basic car care, under-hood inspection (fluids, belts, hoses), removal and replacement of common parts (wiper blades, bulbs, fuses), cooling system maintenance, battery/charging system diagnosis, lubrication system maintenance, tire information, brake inspection, minor ignition system maintenance (spark plugs, wires, firing order), car buying, car insurance, and service information. Students are responsible for course supplies and materials.

Outdoor Power

TEC 219

½ Credit

Elective 9,10,11,12

Equipment Technology

Prerequisite: None

Students will study the theory and operation of two- and four-stroke engines. They will gain hands-on experiences by disassembling, analyzing, and reassembling a small engine. Students will be encouraged to bring in repair projects from home. The course integrates and reinforces basic science principles and mathematical concepts while providing hands-on experiences. Students are responsible for course supplies and materials.

Auto Technology 1 TEC 223 ½ Credit Elective 9,10,11,12
Engine Systems

Prerequisite: Consumer Auto or Outdoor Power Equipment Technology
Automotive Technology 1 is an introduction to basic engine construction and operation. Students will disassemble an engine to study engine components, operation, testing procedures, and engine trouble diagnosis. Students will study the following automotive engine systems: cooling, lubrication, fuel, electrical, and ignition. Students are responsible for course supplies and materials.

Auto Technology 2 TEC 230 1 Credit Elective 10, 11, 12

Prerequisite: Automotive Technology 1/Engine Systems
This course is designed for students interested in entering the automotive profession or gaining a solid foundation of the automotive field. Students will learn how to diagnose and repair electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. The three Cs of auto repair will be emphasized: Concern, Cause, and Correction of system problems. If this course is taken at Memorial, it is considered the first year of the Automotive Youth Apprenticeship Program. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.

Auto Technology 3 TEC 240 1 Credit Elective 11, 12

Prerequisite: Automotive Technology 2
This course is designed for further study of the automotive profession. It is an independent study course that offers further practice with automotive competencies in electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.

Auto Technology 4 TEC 250 1 Credit Elective 11, 12
Advanced Engines

Prerequisite: Automotive Technology 2
This course is designed for further study of the automotive profession. It is the study of and further practice with automotive competencies in engine rebuilding, including engine removal, disassembly, inspection and measurement, cleaning, engine machining, re-assembly, test operation, welding basics, and torch operation. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.

**Auto Youth
Apprenticeship Program**

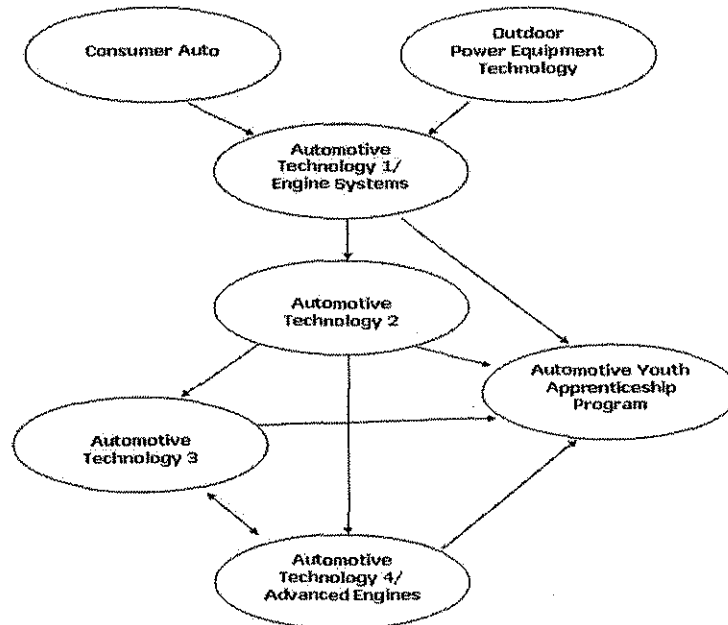
TEC 260

1 Credit

Elective 11, 12

Prerequisite: On track for high school graduation, Automotive Technology 1/Engine Systems. Automotive Youth Apprenticeship (YA) is a rigorous two-year elective program for high school juniors and seniors that combine academic and technical classroom instruction with mentored on-the-job learning. This statewide program gives students the opportunity to experience a career while still in high school. Students attend Memorial High School for the first period of the day during the first year of the Youth Apprenticeship program. Second year students continue courses at Madison Area Technical College. Please see your counselor and your automotive teacher if you are interested in this program. Student is responsible for transportations and other course supplies and materials.

Transportation Course Sequences



| | | | |
|--|----------------|-----------------|-------------------------------|
| Design Drafting & Computer Graphics | TEC 310 | 1 Credit | Elective 9,10,11,12 |
| Prerequisite: None | | | |
| This introduction to design and drafting covers the basics of creating a technical drawing using both sketching and computer-aided drafting systems. This course will introduce students to a variety of design areas including mechanical engineering, architectural design and computer graphics. Software for the class includes M.S. Office, M.S. Publisher, Autodesk Inventor and Autodesk Revit. | | | |
| Introduction to Engineering (Project Lead The Way) | TEC 320 | 1Credit | Elective 9, 10, 11, 12 |
| Prerequisite: Algebra recommended or concurrent enrollment | | | |
| This course introduces students to the design process and the tools used in product development. Students will experience first-hand the activities in which engineers engage throughout the design cycle. Development of design briefs, sketching, 3D solid modeling, and prototyping through computer-aided drafting are part of the course. Students will have the opportunity to learn ways in which design techniques apply to many fields such as healthcare, business, art and animation, manufacturing, and engineering. Problem solving and math as it applies to products and services for today's society are emphasized. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. | | | |
| Principles of Engineering (Project Lead The Way) | TEC 330 | 1 Credit | Elective 10, 11, 12 |
| Prerequisite: Geometry recommended or concurrent enrollment | | | |
| Students will experience engineering and design technology and use various technological systems and manufacturing processes that demonstrate ways in which engineers and technicians use math, science and technology to benefit people. This course will be a mix of hands-on and academic activities including computer-aided design projects, research activities, case studies, team product development, and discussions on the social and political consequences of technological change. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. | | | |
| Civil Engineering & Architecture (Project Lead The Way) | TEC 340 | 1 Credit | Elective 11, 12 |
| Prerequisite: Geometry recommended or concurrent enrollment | | | |
| Recommendation: Introduction to Engineering or Principles of Engineering | | | |
| In this class you will learn about Civil Engineering and Architecture, using the design process to solve real world problems and apply your creative skills to hands-on-projects. You will use state-of-the-art software to design residential and commercial buildings. This course covers topics such as the roles of civil engineers and architects, project planning, site planning, building design, project documentation and presentation, and interior design. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. | | | |

Engineering Design & Development (Project Lead The Way)

TEC 350

1 Credit

Elective 12

Prerequisite: At least one Project Lead The Way course and teacher's signature
Engineering Design & Development is the capstone research and development course for all of the engineering courses. Engineering Design and Development is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in the preceding engineering course(s) and are guided by the teacher and community mentor / professional engineers. At the end of the course, students must submit a final written report and defend their solutions to a panel of outside reviewers. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.

Civil Engineering & Architecture 2

TEC 360

1 Credit

Elective 11, 12

Prerequisite: Civil Engineering & Architecture
This is an Architectural Design class where students design commercial residence units that use advanced structural procedures. You also will design a light commercial building and create a presentation of your project. Units include passive solar systems, foundation, framing, floor plans, elevations, perspectives, site plans, presentation drawings, including walk-through and fly-over movies. You will use state-of-the-art software to design residential and commercial buildings and have an opportunity to have your design work critiqued by a professional architect. Student is responsible for obligations. **This course is offered at La Follette HS. See your counselor if interested.**

Digital Electronics (Project Lead The Way)

TEC 370

1 Credit

Elective 10, 11, 12

Prerequisite: Algebra I
Digital electronics and micro-computers are in every product that is either plugged into a wall or operated by batteries. This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. **This course is offered at East HS. See your counselor if interested.**

**Computer Integrated Manufacturing
(Project Lead The Way)**

TEC 380

1 Credit

Elective 11, 12

Prerequisite: Completion of Introduction to Engineering and Principles of Engineering with a passing grade OR completion of Metals Manufacturing 1 and Metals Manufacturing 2 with a passing grade.

Students will take the three-dimensional modeling skills they learned in *Introduction to Engineering* and combine them with the building and manufacturing processes learned in *Principles of Engineering* to a whole new level that includes rapid prototyping and using a three-dimensional printer. Using Autodesk Inventor and other computer programs, students will create actual models and prototypes with Computer-Numeric-Control machines, robotic arms and automated manufacturing. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available. **This course is offered at East HS. See your counselor if interested.**

Home Maintenance & Improvement (WoodLINKS)

TEC 413

½ Credit

Elective 9, 10, 11, 12

Prerequisite: None

Students will learn and practice techniques and skills used in maintaining a home. Students will be exposed to basic home construction principles and the functions of related building trade areas. Students will learn about power and hand tools used in the building industry and gain hands-on experience with repairing a leak in copper pipe, patching a hole in a wall, wiring a switch or an outlet, diagnosing fuse problems, and unplugging a drain. Safety practices and procedures are demonstrated, and practiced. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Aerospace Engineering SCI 610
(Project Lead The Way)

1 Credit

Elective 11, 12

Prerequisite: Freshman level science and teacher's signature
Recommendation: Physics and Algebra 2 or concurrent enrollment
Aerospace is a two-semester advanced level, integrated, project-based science course with an emphasis on the application of the biological, chemical and physical principles inherent in aviation and space studies. Units of instruction include aviation history, aerodynamics, aircraft stability and design, physiology of flight, aerospace materials science, space exploration, and autonomous vehicle design. Most lessons are reinforced through the use of computer technology and software such as Flight Simulator, Inventor, and AERY. Field trips during the year offer the opportunity to pilot single-engine aircraft under the guidance of certified flight instructors and to experience kit built aircraft manufacturing, the EAA museum, and aircraft restoration. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way.

Astronomy

SCI 620

1 Credit

Elective 11, 12

Prerequisite: Integrated Science and geometry
The primary aim of the course is to trace the developing views of the astronomical universe and to communicate a sense of the incredible growth this discipline has undergone over the last 2000 years. A secondary goal is to give you some understanding of the methods, goals, and limitations of science. Throughout this course we emphasize not only what we believe to be true, but also why we think it is so.
The class meets daily in the Planetarium, for an outstanding simulation of the objects to be studied and the motions to be analyzed. In addition, you verify these presentations with your own observations of the night sky.

**Environmental
Science AP**

SCI 630

1 Credit

Elective 11, 12

Prerequisite: Biology or teacher's signature.
AP Enviro uses a multidisciplinary approach to study the environment, how it works, and the issues associated with the environment. Some of the topics covered include ecology, climate, population studies, energy and alternative energy, and pollution. The course includes traditional lab activities, outside research, class discussion, readings and research to address the many topics covered. Although taking the AP Exam is not required, the course topics discussed during the year prepares you for the AP Environmental Science exam, possibly resulting in college credit. More information is available at:
<http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html>

½ MMSD Summer School
¼ MMSD Fall Term Credit
1 UW Madison Independent Study Credit (additional credits at discretion of professor)

Prerequisites: Current sophomore or junior, GPA of 3.6, Successful completion of 1-2 years of science and math.

This course is available to students from all MMSD high schools, for a total of 16 students each year. Students are chosen based on a written application and two teacher recommendations. Applications are available from the Science Department at the beginning of each calendar year. Participants are placed in a UW Madison research laboratory for approximately 9 weeks and work there on research projects assigned by the professor of each lab. You are expected to spend between 25 and 35 hours in the lab weekly. During the summer you meet in small discussion groups to give updates of your work-in-progress. In addition, you meet individually with the coordinator at least once during the summer. In the fall, you prepare scientific research papers and present your work in poster format at a district-wide event. Fall work is independent, with the exception of 2 or 3 informal meetings.

For more information please contact the program coordinator, Rachel Egan, 772-3253 or at regan@madison.k12.wi.us

PLTW: Principles
Of the Biomedical Sciences (BSE)

SCI 710

1 Credit

Elective 11, 12

Length: One Semester. Can be taken first semester or second semester

Prerequisite: Completion of high school science requirements in grades 9 and 10 or consent of high school administrator.

This course provides an introduction to the biomedical sciences through exciting "hands-on" projects and problems. Student work involves the study of human medicine, research processes and an introduction to bio-informatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Key biological concepts including: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease are embedded in the curriculum. Engineering principles including: the design process, feedback loops, fluid dynamics, and the relationship of structure to function are incorporated in the curriculum where appropriate.

**PLTW: Human
Body Systems (HBS)**

SCI 720

1 Credit

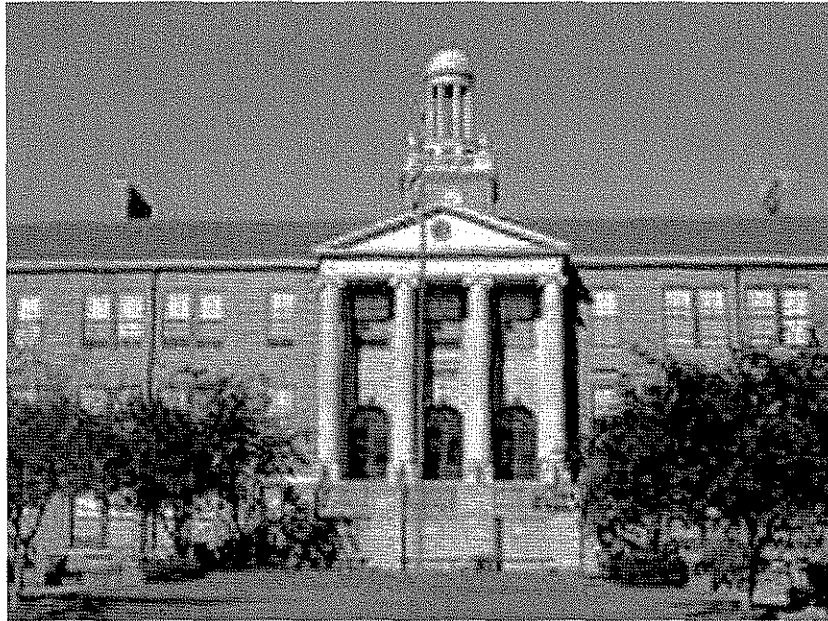
Elective 11, 12

Length: One semester. Offered second semester only

Prerequisite: Completion of high school science requirements in grades 9 and 10 or consent of high school administrator.

Students will examine the processes, structures, and interactions of the human body systems to learn how they work together to maintain homeostasis (internal balance) and good health. Using real-world cases, students take the role of biomedical professionals and work together to solve medical mysteries. Hands-on projects include designing experiments, investigating the structures and functions of body systems, and using data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiratory operations. Important concepts covered in the course are communication, transport of substances, locomotion, metabolic processes, defense, and protection.

Madison West High School



**Program of Studies
2010-2011**

Digital Photography I ART533 1/2 Cr Elective 9-12
 Students must have their own digital camera (3mp or more). Students will use Adobe Photoshop while learning the fundamentals of photography and composition. Students will use digital imaging techniques to create black and white and color artwork.

Digital Photography II ART543 1/2 Cr Elective 9-12
**Prerequisite: Digital Photography I or Design Graphics I*
 Students must have their own digital camera (3mp or more). Students will complete more complex assignments using Adobe Photoshop and other imaging software, delving further into the program, including digital painting as well as black and white and color photography. Students will continue developing their imaging skills, personal vision, and critical thinking ability. Students will learn to place artwork into Adobe InDesign software, used for publishing.

Digital Photography III ART553 1/2 Cr Elective 11-12
**Prerequisite: Digital Photography II*
 Students must have their own digital camera (3mp or more). Advanced digital photography students will continue to develop digital imaging skills and create in-depth artwork that reflects their individual artistic expression using Adobe Photoshop and other software. Students will compile a digital portfolio of their work in preparation for admission to a 2-year or 4-year college program of study and/or the workforce.

Web Design ART568 1/2 Cr Elective 10-12
**Prerequisite: Digital Illustration I or Digital Imaging and Photography I*
 Students will use Adobe Dreamweaver to create a personal website. All students will create a site that follows both form and function, highlights their accomplishments in art as well as academics, and other personal achievements. Advanced art students may create an online portfolio featuring their artwork.

Animation ART578 1/2 Cr Elective 10-12
**Prerequisite: Digital Illustration I or Digital Imaging and Photography I*
 Students will create several animations using Adobe Flash. Students will learn about time-based storytelling as they learn to navigate the program. Students will learn how to draw in Flash and import images from Adobe Illustrator and Photoshop. Students may use sound for animations.

Independent Study-Art 1/2 Cr Elective 11-12
**Prerequisite: Application form required. At least four (4) semesters of art classes and consent of instructor.*
 Independent Study allows students to add another hour of Studio Art. This class is for the advanced art student who is self motivated and has the potential to be productive working with a Individual Contract Based Curriculum. This course is designed to further develop skills through a more in-depth study of various media and techniques of choice by individual artists. **An application needs to be submitted to the independent study committee for consideration by the end of the second week of each semester.**

BUSINESS and MARKETING EDUCATION

**Students who have taken Keyboarding and Advanced Keyboarding at West are eligible for advanced placement credits at Madison Area Technical College in business programs.

| Grade 9 | Grade 10 | Grade 11 | Grade 12 |
|---|--|--|--|
| -Keyboarding -Advanced Keyboarding -Computer Applications -Intro. to Business and Marketing -Applied Computer Keyboarding | -Keyboarding -Advanced Keyboarding -Computer Applications -Intro. to Business and Marketing -Applied Computer Keyboarding -Web-Page Design for Bus./Marketing -Money Mgt./Personal Finance -Business and Personal Law | -Keyboarding -Advanced Keyboarding -Computer Applications -Applied Computer Keyboarding -Web-Page Design for Bus./Marketing -Money Mgt./Personal Finance -Business and Personal Law -Accounting I | -Keyboarding -Advanced Keyboarding -Computer Applications -Applied Computer Keyboarding -Web-Page Design for Bus./Marketing -Money Mgt./Personal Finance -Business and Personal Law -Accounting I -Accounting II for Dual Transcribed Credit |

Keyboarding BUS203 1/2 Cr Elective 9-12
Do not leave West without good keyboarding skills. This one-semester course is designed to introduce and develop your keyboarding skill and promote the efficient use of the computer keyboard. Students will learn to keyboard reports, letters, outlines, and centering projects. Several up-to-date, exciting programs along with a word processing program will be used during this course. It is strongly suggested that this course be followed by Advanced Keyboarding.

Advanced Keyboarding BUS213 1/2 Cr Elective 9-12
**Prerequisite: Keyboarding*
This one-semester course will improve your keyboarding and formatting skills. Several speed- and accuracy-building programs along with a word processing program will be used. The work will include keyboarding tables, more complex reports, advanced letter styles, personal data sheets, and other useful formatting projects. A portfolio/keyboarding reference manual will be created during this semester. In order to develop strong keyboarding skills necessary for today's technology driven world, this course is recommended for students attending college and/or entering the business world.

Introduction to Business and Marketing BUS227 1/2 Cr Elective 9-10
It is an exciting time in the Business and Marketing world. This is the perfect course to take to introduce students to the Business and Marketing world as well as the classes offered at West. Through hands-on projects, discussions, guest speakers, and other activities, students will explore how the economy works, as well as types of businesses, interviewing and job seeking skills, and marketing, as well as other business and marketing related topics, Prepare for the future. Take this course!

Business and Personal Law BUS323 1/2 Cr Elective 10-12
Students who enjoy learning about trials, discussing the impact of current events on law and want to know more about their rights as individuals should take this course. Students will participate in a variety of interactive and practical activities, such as in-class mock trials, case studies, interpreting contracts, Internet activities, a field trip and guest speakers as part of the process of learning how law, specifically business law, impacts society.

Computer Applications BUS403 1/2 Cr Elective 9-12
Don't leave high school computer illiterate. This one-semester course is designed to introduce and reinforce computer application work in: Windows, Word, Access, PowerPoint, Publisher, and the Internet. The Office 2007 Suite will be used. This is an essential course for becoming comfortable with major computer applications and to prepare for college and/or work experience. Keyboarding in highly recommended before taking this course, but is not a prerequisite.

Money Management/Personal Finance BUS413 1/2 Cr Elective 10-12
Personal finance is one of the most useful classes a high school student can take in order to prepare for their future. This one-semester class will teach students: how to prepare themselves for the job market, how taxes impact their lives, how to create and use a budget, how to build wealth, the pros and cons of home ownership versus renting, how credit can be both your best friend and your worst enemy, how financial institutions work, and about the different types of insurance. Students will also learn about investing in stocks, bonds, and mutual funds, as well as how to save money and why it is important to save money. Students who take this class feel good about what they have learned and how it will help them in the future.

Accounting I BUS431/432 1 Cr Elective 11-12
This year long course is an introduction to the world of accounting. This is a must have for any student interested in pursuing any business related major or for students who want to start their own business. Every business in our society is impacted by accounting based decisions. In this course, students will have the opportunity to use real-world accounting software, source documents, financial statements, and multimedia to prepare and analyze business transactions. A Wisconsin state-sponsored Youth Apprenticeship program is available in the area of finance.

Accounting II (Dual Transcribed Credit) BUS451/452 1 Cr Elective 12

**Prerequisite: Instructor Approval required*

This course is designed to help students understand basic accounting principles and procedures. The two major objectives are (1) preparation for a career in an accounting or any business-related field, and (2) preparation for personal uses of accounting in your everyday life. Major concepts include: how to records perpetual business transactions, determine a business profit or loss, prepare financial reports and budgets, and analyze financial statements for personal and business decisions. Students that enroll in this course will be eligible to receive college transcribed credit. A Wisconsin state-sponsored Youth Apprenticeship program is available in the area of finance.

Applied Computer Keyboarding BUS491/492 1 Cr Elective 9-12

**Recommended for ESL students, DPI level 1.5-3.5.*

Applied Computer Keyboarding is a one-year course which is designed to develop keyboarding skills on a computer keyboard. Students will use proper keyboarding techniques and English grammar concepts while keying a variety of personal and business documents. This is a great class to integrate and reinforce the English language.

Web-Page Design for Business/Marketing BUS503 1/2 Cr Elective 10-12

An exciting class!! With technology being a large part of the workplace, web pages have become an essential component of any business operation. Having the understanding of how web pages can reach customers is vital to the success of every business. Students will learn to create and analyze web pages. Students will create personal web pages as well as web pages for local businesses. Macromedia Dreamweaver and Fireworks will be used.

Marketing Courses

Suggested Sequence for Marketing Co-op:

| Grade 9 | Grade 10 | Grades 11 | Grade 12 |
|--|---|---|---|
| -Marketing & Sales -Advertising & Display | -Marketing & Sales -Advertising & Display -Leadership Skills -Store Management | -Marketing & Sales -Advertising & Display -Leadership Skills -Store Management -Store Management II -Starting a Business -Sports, Hospitality & Entertainment Marketing | -Marketing & Sales -Advertising & Display -Leadership Skills -Store Management -Store Management II -Starting a Business -Sports, Hospitality & Entertainment Marketing -Advanced Marketing -Marketing Internship |

Marketing & Sales MRK123 1/2 Cr Elective 9-12

**Prerequisite for other Marketing courses.*

Introduce yourself to the exciting world of marketing! Students will learn how products are brought from the idea stage to becoming available on store shelves. Everything from distribution to sales will be explored. Create new products and learn how to market them efficiently. The course includes fun activities such as: developing newspaper ad layouts, creating displays, and analyzing television and radio ads. This hands-on course will provide the basis for a career in marketing. Students who are enrolled in this class can also be members of the DECA Chapter.

Advertising & Display MRK133 1/2 Cr Elective 9-12

A "hands on" creative course for 9th-12th grade students with practical and fun activities: developing newspaper ad layouts, creating displays, analyzing television and radio ads as well as looking at the exciting world of advertising and visual merchandising. Students develop creative billboard ads, direct mail brochures and explore media careers with highlights of (1) Analyzing your favorite TV commercials, (2) Creating your own cereal brands, and (3) Working in teams to create displays.

Leadership Skills MRK143 1/2 Cr Elective 10-12
Leadership is the ability to influence the thinking and actions of people. This class will teach students the skills necessary to be a leader in the community and workplace. Activities will include: leadership trait analysis, group decision making, teamwork, structured meetings, leadership workshops, and community service projects. The following are a sample of the core elements: Becoming a leader, not a follower, How to influence people and make friends, and Learn what traits are essential to becoming a leader.

Store Management MRK201/202 1 Cr Elective 10-12
No prerequisites but strongly recommend having one semester or more of Marketing classes.
Store Management is a full-year course that operates the Moose Head Shed, our school store. **Students are expected to work in the school store during resource time 2-3 times per week.** Activities include: buying/ordering merchandise, selling, promoting and displaying merchandise, and suggesting new product/service ideas. Good attendance is imperative to keep the store operating. This course is valuable for anyone considering a business career and/or business major in college or technical school. Students will learn by doing in this course!

Store Management II MRK211/212 1 Cr Elective 11-12
**Prerequisite: Completion of Store Management with an A and consent of instructor.*
Store Management II offers selected students the opportunity to serve as store managers for the school store. Students are responsible for scheduling, training and evaluating employees. They also meet with sales representatives, assist in ordering merchandise, run the store meetings, and keep the accounting records. This is a great experience for a student that plans on a business career or business major in college. **Students are expected to work 2-3 shifts per week in the school store completing orders, accounting, scheduling, supervising store operation at noon and in the morning.**

Starting A Business MRK227 1/2 Cr Elective 11-12
Have you thought about starting your own business? Would you like to learn the steps in creating a small business? Write your own business plan and present it to business owners. Learn about developing your business idea, location, marketing, financing, managing people, and legal guidelines. Students will practice business and economic principles in this interactive course that will take them beyond the school building and into the business community. This is a great course for college-bound students pursuing business or marketing or students thinking about opening a business after high school. The course is team taught with community, business, and government leaders through the Business & Education Partnership and Junior Achievement.

Sports, Hospitality & Entertainment Marketing MRK253 1/2 Cr Elective 11-12
**Prerequisite: Marketing & Sales (MRK123)*
Course topics include: corporate sponsorship, event promotions, career opportunities, and legal aspects involved with the industries. Classroom instruction will be reinforced through the use of guest speakers, case studies, field trips, and in-school promotional projects. A basic understanding of marketing is necessary to enroll in this course (see above prerequisite).

Advanced Marketing MRK301/302 1 Cr Elective 12
**Prerequisite: Marketing and Sales (MRK123)*
Advanced Marketing is an extension of the Marketing and Sales course. Consumer behavior, marketing research, management strategies, employability skills, development of marketing plans, and other advanced marketing concepts will be examined during this one-year course. Advanced Marketing can be taken in conjunction with the course listed below called Marketing Internship (MRK310) to earn two credits. **Students completing this course will earn advanced standing at MATC.**

Marketing Internship MRK311/312 1 Cr Elective 12
**Prerequisite: Students must complete a program application, interview, and obtain a letter of reference from one other teacher.*
Get paid, receive credit and gain experience. Learn while you earn by linking your classroom knowledge to paid employment in a business environment in the Madison area. Build leadership skills while applying classroom knowledge in a real business setting. Students may be employed in areas relating to Accounting, Business Support Services, Finance, Information Technology, Law, Marketing, and Real Estate. These are employment opportunities that students would have difficulty securing on their own. At the time of course completion and 180 on the job hours, students will be awarded a State Certified Employability Skills Certificate. A great resume enhancer and conversation piece during job interviews.

COMPUTER SCIENCE

Introduction to Computer Programming

CMP127/128

1/2 Cr

Elective 10-12

**Prerequisite: Completion of Algebra I with C or better*

This course is a one-semester course focusing on beginning computer programming, using the languages of Scheme and/or Java. It will be necessary for students to solve problems by writing a plan, changing the plan into a computer program and using the program to obtain desired results.

Computer Science A AP

CMP211/212

1 Cr

Elective 11-12

**Prerequisite: Completion of Algebra 2-Trig or Intro to Computer Programming or consent of instructor*

This is a two-semester course in computer programming that prepares students for computer science work in college. The topics covered in the course are recommended by the College Board's Advanced Placement Computer Science curriculum and include algorithms, object-oriented programming, one and two-dimensional arrays, and lists. As directed by the College Board, the course is taught in the Java programming language. Students who are successful in this course may take the Advanced Placement exam in May.

ENGLISH

Students are required to earn four credits of English for graduation. Ninth and tenth grade English is required of all students. In grades 11 and 12, students are given a choice of non-sequential semester electives, each providing one-half credit towards graduation. College preparatory students, however, should check with the colleges of their choice for verification on what courses are acceptable for college admission; i.e., some colleges might not accept courses in such areas as theater or media for admission.

Students entering grades 10-12 may select more than one English course in a semester but no more than 1.5 credits of English per year. Elective courses may not be offered both semesters. Enrollment will be by grade level with priority given to seniors, then juniors, then sophomores. The number of sections of a course is dependent on student selection and teacher allocation.

English 9

ENG101/102

1 Cr

Required 9

Ninth grade English includes work on the fundamentals of composition, reading and literary analysis skills, and oral communication. Writing assignments will focus first on effective paragraph development, then on longer themes, if appropriate. Sentence structure, variety, and accuracy in vocabulary, punctuation, and appropriateness of language will be emphasized. The Literature that will be covered, varies in length and genre: short stories, poetry, drama, and novels. Titles may include: *Of Mice and Men*, *To Kill a Mockingbird*, *Inherit the Wind*, *The Odyssey*, *Romeo and Juliet*, *Night*, *Call of the Wild*, and others at the teacher's discretion. Within the classroom, both remedial and enrichment activities will be provided.

English 10 (Embedded Honors option available)

ENG201/202

1 Cr

Required 10

Students will explore the conception of the American Dream and their own pursuits for happiness. Beginning with the wisdom of America's forefathers buttressed by the timeless struggle of the immigrant, the course will examine the viability of the dream. Selections will be taken from writers such as Harriet Jacobs, Frederick Douglas, Horatio Alger, Ben Franklin, John Steinbeck, and Pam Muñoz Ryan. Students will have the opportunity to read some of the following titles: *Black Boy*, *There Are No Children Here*, *The Great Gatsby*, *The Death of a Salesman*, and *The Color Purple*. The second semester will include a research project along with a thematic study of identity and justice in the works of Capote, Salinger, Trumbo, Bradbury, King, and Golding. In early spring, students will participate in a Shakespeare festival after having read *A Midsummer Night's Dream*, *Othello* or *Julius Caesar*.

Mass Media

ENG943

1/2 Cr Elective 10-12

The goal of this course is to help students become responsible consumers of the mass media by critically examining television, radio, film and advertising. Students will study the operation of these media, the effect the media has on them as consumers, and the effect consumers can, or should have, on the media. Papers on these topics are required. Students will also learn the basics of video production and editing through projects such as narratives, documentaries, public service announcements, and/or news stories. Guest speakers in local media industries are invited to the class.

Multico

ENG957

1 Cr Elective 10-12

**Prerequisite: By teacher selection only.*

MULTICO is a company of West High School students chosen by the instructor to reflect the diverse ethnic and racial population of Madison's schools. MULTICO writes and performs a series of short sketches that highlight race, gender, sexuality and conflict. The group tours Elementary and Middle Schools with an original thirty minute production focusing on the concerns and experiences of children and adolescents in a multicultural, multilingual urban environment. MULTICO is funded by West High's Regent Drama Club and Friends of West Drama, as well as the MMSD. MULTICO provides younger children with role models from their own and other racial and ethnic groups who are working together, creating together, having fun together and performing. MULTICO meets the first two periods during first semester only.

Theater Arts III

ENG958

1/2Cr Elective 12

**Prerequisite: Successful completion of Theater II (Honors)*

This course focuses on directing. Each student will direct a one-act play for Fine Arts Week in May. Students will work on script analysis, character development, acting techniques and read articles written by the people who created those techniques.

Student Performances include: preparing and performing two contrasting monologues, a total of four minutes in length for use in university theater auditions, and a 10-15 minute scene.

Written Work includes: written critiques of each class monologue and scene, a 10 page scene study and a 20 page prompt book.

Readings include: *The Great Acting Teachers and Their Methods* by Richard Brestoff, *On Acting* by Sanford Meisner, as well as a large number of one act plays and 4-5 full length plays that the class will study or see performed.

Performances: The class will attend three plays. Students will write a critique of each, concentrating on particular aspects of theater.

| |
|-------------------------------------|
| FAMILY AND CONSUMER SCIENCES |
|-------------------------------------|

Culinary Basics

FCS103

1/2 Cr Elective 9-12

This course is the first in a series of three culinary classes. If you want to know why your cake did not turn out right, how to cook vegetables so that people will eat them, or how to cook food that doesn't come out of a box or can, then this is the course for you! In this class, you will practice basic food preparation techniques in order to turn out tasty "good for you" food. Be prepared to work in small groups, taste your products, meet new people and expand your food and nutrition knowledge.

Chef II

FCS113

1/2 Cr Elective 9-12

**Prerequisite: Successful completion of Culinary Basics*

Put your *Chef* skills to work! Which food color is most appealing? How does the dining atmosphere affect appetite?

What happens if there is not enough Vitamin A in the diet? Explore human health and psychology as it relates to food. You will also learn specialized food preparation techniques. Join us for topics such as: entertaining, cake decorating, regional cuisines, delicious food combinations and more. Career exploration and decisions such as meal planning, food costs and budgeting are included throughout the semester.

International Cuisine

FCS128

1/2 Cr Elective 10-12

**Prerequisite: Successful completion of Culinary Basics and Chef II or Intro to Hospitality & Culinary*

Expand your culinary horizons. Explore unique world cuisine. Trifle, homemade pasta, Jamaican jerk chicken and samosas are just a few of the foods that have been prepared in the past. You will build on the skills covered in Chef and Chef II. Minimal review will occur with emphasis on new and more complex techniques. If you like to cook, are considering a career in the culinary field, have an adventurous spirit, and like to work in small groups, this is the course for you!

Gourmet Chef 1/ProStart

FCS131/132

1Cr

Elective 10-12

**Prerequisite: None*

Are you considering a career in the restaurant or food industry? ProStart is an initiative of the National Restaurant Association Educational Foundation. This course will allow students to explore careers in hospitality, tourism and much more. Students may attain ServSafe certification, which is required by local governments and health departments to promote food safety throughout the industry. Prepare a restaurant-style meal for selected customers and participate in food service catering. Make appetizing food that looks and tastes delicious! Whether you're looking to enter the job market right after high school or plan to attend college, be part of this career building program.

Health Sciences Occupations

FCS217

1/2 Cr

Elective 10-12

Get a jump start on a career in the rapidly growing health care industry. Many describe this introductory course as a "make or break" in their decision to go into health care before investing in college tuition. In this interdisciplinary course, students will become familiar with medical terminology and body systems using Anatomy in Clay. Students will also explore ethical and legal health care issues. Students completing this course with a "B" will receive advanced standing in Madison Area Technical College's Medical Terminology course. Students are invited to participate in Health Occupations Students of American Club activities, community service, and competitive state and national events.

Medical Terminology for Transcribed Credit

FCS223

1/2 Cr

Elective 11-12

Prerequisite: Grade of A or B in Biology or Health Science Occupations*Fee: \$60 (textbook, workbook and CD-ROM)*

If you are interested in a career as a medical translator, medical transcriptionist, nurse, physician's assistant, physician or any medical/health-related career this course is for you. Students will gain knowledge of terminology, vocabulary and language used in health-related careers. Students will practice formation, analysis, and reconstruction of terms. There is an emphasis on spelling, definition, and pronunciation. The class is an introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems related to health careers. Students are invited to participate in Health Occupations Students of America (HOSA) Club activities, community service, and competitive state and national events.

*Transcribed credit courses earn high school and technical college credit and are dependent upon MMSD and a Wisconsin technical college annually reaching and fulfilling an agreement on course curriculum, teacher requirements, textbooks, etc. Students will generally know in the first quarter whether transcribed credit is planned to be available for students earning a C or better in the course.

****Additional courses offered in Health Sciences at schools other than West. (See your counselor)**

- **Nursing Assistant** FCS250 .75 credit Students 16 yrs and above East, LaFollette, Memorial Lab fee \$25 *Prerequisite: Successful completion of Health Science Occupations or instructor signature*
This course is team taught by a vocationally certified teacher and a registered nurse. Students learn and apply care giving skills in lab and professional settings. Students seeking employment in any health care field will find this a valuable first step. Nursing Assistant is a pre-requisite to all Wisconsin Technical College System nursing programs and highly regarded in 4-year college admissions. Units of study and skills include: human development, infection control, patient transfer, health and disease, personal care and hygiene, nutrition, and special care.

To meet certification requirements, students must complete clinical experiences in a local health care agency arranged by the teacher, maintain a grade of 75% or better, and meet attendance requirements. The high school is not responsible for transportation. A medical checkup, TB skin tests, successful background check and \$115 certification test fee are required. Class meets for additional hours of lab and clinical time on weekends, evenings, and/or breaks.

Family Psychology

FCS417

1/2 Cr Elective 10-12

This course encourages the student to look at their own personal development and the impact of family relationships on personal growth and development. The class begins by investigating the developing infant brain, exploring parenting roles and styles, and the impact of extended family, friends and community resources upon family relationships and the growing and developing child. Also investigated are: personal choices and their impact upon self and family including: communication, sexuality, and current family issues. Students will use Anatomy in Clay to construct a human brain and parts of the reproductive system as well as have the choice of a parenting research project or the infant simulator, *Real Care BabyPlus* (computerized), which cries out loud!

****Passing this course with a "C" or better is a *required prerequisite* for students wishing to receive the **Assistant Child Care Teacher (ACCT) certification** from the state of Wisconsin. This certification will gain you better access to a full or part-time position in a day care center, as a nanny or au pair (if you are interested in improving your foreign language skills, travel, getting paid, pediatric medicine, social work, etc...)**

Child Development II

FCS418

1/2 Cr Elective 11-12

**Prerequisite: Successful completion of Family Psychology with a "C" or better and be at least 17 years old making student eligible for the ACCT and Infant/Toddler Certifications.*

In this class, students will increase their knowledge of child development, design the West's Little Regents Preschool classroom environment including changing it to reflect the weekly themes. Students will study child development from the ages of birth to five. Students will increase their knowledge of lesson planning, teaching, observation, positive guidance, and conflict resolution strategies. Students will then become a teacher in a six week program right here at West for children in the Madison community. It is a challenging and enjoyable class for anyone who might like to work with children in a *daycare, nanny or au pair setting, pediatric medicine, or social work*. Students completing this course with a "B" are eligible to receive advanced standing in Madison Area Technical College's Child Care course.

****Assistant Child Care Teacher (ACCT) and Infant Toddler Certifications** are issued by the state of Wisconsin, and is required for employment at preschools in this state. Students must have an interest in the childcare industry or in a professional or technical career involving children. Students should meet the physical and emotional health requirements for employment. First Aid and CPR training are strongly recommended, but not required for student's wishing to seek this certification.

Child Development

FCS428

1/2 Cr Elective 11-12

**Prerequisite: Successful completion of Family Psychology.*

****This class is designed for students who are not seeking ACCT certification.**

Join this class to participate in West's *Little Regents* preschool program. Students will study child development from the ages of birth to five. Students will also learn planning, teaching, positive guidance and conflict resolution strategies. Students will become a teacher in a six week program right here at West for children in the Madison community. It is a challenging and enjoyable class for anyone who enjoys children

FOREIGN LANGUAGE

French I

FOR111/112

1 Cr Elective 9-12

French I begins with a strong emphasis on speaking, reading, writing, and understanding. We use dialogues to involve students in simple conversation. Tapes are used to hear native speakers and to improve accent and intonation. In each chapter, short cultural selections about French people will introduce grammar, reading, and writing projects.

Since the introductory level of a foreign language is the foundation for all succeeding levels, the West High Foreign Language Department requires that a student pass this level with a grade of D or better before the student may proceed to level II. In the event that a student receives a grade of F the *first* semester of the introductory level, he/she may **not** continue that language study second semester.

TECHNOLOGY AND ENGINEERING EDUCATION

Applied technology courses are normally graded on the traditional grading system. A pass/fail option is available to those students who inform the instructor of their choice **before the end of the third week of school.**

(See the instructor for more information.)

| Madison West High School Pre-Engineering Academy - Recommended Courses | | | | |
|---|---|---|---|---|
| Call 204-3189 or e-mail eburdett@madison.k12.wi.us for information or advisement. | | | | |
| ENGINEERING FOCUS | | | | |
| | FRESHMEN | SOPHOMORE | JUNIOR | SENIOR |
| Engineering Courses | -Intro to Engineering -Materials Science -Design/Drafting/CAD | -Intro to Engineering -Principles of Engineering -Design/Drafting/CAD -Materials Science | -Intro to Engineering -Principles of Engineering -Design/Drafting/CAD -Materials Science -Civil Engineering & Arch. | -Intro to Engineering -Principles of Engineering -Design/Drafting/CAD -Materials Science -Civil Engineering & Arch. |
| Math Track 1 | Geometry Honors Integrated Math 2 | Algebra 2-Trig Honors Integrated Math 3 | Pre-Calculus Integrated Math 4 | Calculus AB AP |
| Math Track 2 | Algebra 1 Honors Integrated Math 1 | Geometry Honors Integrated Math 2 | Algebra 2-Trig Honors Integrated Math 3 | Pre-Calculus Integrated Math 4 |
| Science Track 1 | Biology 1 | Chemistry | Acc. Math Physics | Science elective |
| Science Track 2 | Biology 1 | General Chemistry | General Physics | Science elective |

| Madison West High School Pre-Engineering Academy - Recommended Courses | | | | |
|---|---|---|---|---|
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| ARCHITECTURAL FOCUS | | | | |
| | FRESHMEN | SOPHOMORE | JUNIOR | SENIOR |
| Architectural Courses | -Intro to Engineering -Design/Drafting/CAD | -Intro to Engineering -Design/Drafting/CAD | -Intro to Engineering -Design/Drafting/CAD -Advanced Design | -Intro to Engineering -Design/Drafting/CAD -Advanced Design |
| Art Courses | Drawing & Design I | Drawing & Design II | Art Seminar | Art Seminar |
| Math Track 1 | Geometry Honors Integrated Math 2 | Algebra 2-Trig Honors Integrated Math 3 | Pre-Calculus Integrated Math 4 | Calculus AB AP |
| Math Track 2 | Algebra Honors Integrated Math 1 | Geometry Honors Integrated Math 2 | Algebra 2-Trig Honors Integrated Math 3 | Pre-Calculus Integrated Math 4 |
| Science Track 1 | Biology 1 | Chemistry | Acc. Math Physics | Science Elective |
| Science Track 2 | Biology 1 | General Chemistry | General Physics | Science Elective |

CONSTRUCTION AND FINE WOODWORKING

Introduction to Woodworking (WoodLINKS) TEC203 1/2 Cr Elective 9-12

**Fee: \$30*

In this hands-on course students will learn modern woodworking skills by building useful projects. The curriculum focuses on standard woodworking procedures, properties of wood, accurate measurement, and the safe use of hand and power tools. At the end of the semester, successful students take home attractive projects and many new skills. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Furniture and Cabinetry (WoodLINKS) TEC218 1/2 Cr Elective 9-12

**Prerequisite: Introduction to Woodworking*

This course is a continuation of *Introduction to Woodworking*. Students will learn additional advanced skills related to cabinet making and architectural woodworking. Areas of study include: safety, wood material technology, woodworking design, project planning, woodworking machine operation, finishing methods and techniques, industry standards, and customizing. Students will also explore career opportunities and ways that woodworking applies to daily lives. Students will work independently or in groups to complete at least one major project. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Advanced Furniture & Cabinetry (WoodLINKS) TEC221/222 1 Cr Elective 10-12

**Prerequisite: Furniture and Cabinetry*

This course is the advanced study of wood product processing. Topics include: safety, project planning, design and understanding procedures, and using jigs and fixtures in woodworking. Areas of exploration include veneering, CNC technology and curved and circular work. There are assigned projects with additional time available for student-selected projects. Examples of projects include: shaker style furniture, cabinets, functional student furniture, and tables. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Home Maintenance & Improvements (WoodLINKS) TEC228 1/2 Cr Elective 9-12

Students will learn and practice techniques and skills used in maintaining a home. Students will be exposed to basic home construction principles and the functions of related building trade areas. Students will learn about power and hand tools used in the building industry and gain hands-on experience with repairing a leak in copper pipe, patching a hole in a wall, wiring a switch or an outlet, diagnosing fuse problems, and unplugging a drain. Safety practices and procedures are demonstrated, and practiced. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

Introduction to Construction (WoodLINKS) TEC251/252 1 Cr Elective 10-12

**Prerequisite: Successful completion of Introduction to Woodworking or Home Maintenance & Improvement*

This course is intended for students interested in construction, home building, remodeling, and other building trades. Class activities include project work in carpentry (framing and finishing), electrical, plumbing, drywall, siding, roofing, and HVAC (heating, ventilation, air conditioning). Home repairs and maintenance will also be studied. Students entering the work force after high school as well as students continuing post-secondary education (2 year or 4 year) in the construction field will benefit from this class. This course is part of the district's new initiative focusing on industry based training in wood products manufacturing known as *WoodLINKS*. Students are responsible for course supplies and materials.

****Additional courses offered in Construction at schools other than West. (See your counselor)**

- Fine Woodworking 1 credit Elective 11-12 East, LaFollette, Memorial

COMPUTER AIDED DESIGN & ARCHITECTURE

Design/Drafting and Computer Aided Design TEC311/312 1 Cr Elective 9-12

Students will work with computers to research and model their solutions for many different assignments. Course content will emphasize study in the following:

1. Mechanical design using the cutting-edge “SolidWorks” modeling program in order to see their prototypes in a 3d virtual world.
2. Architectural design using the AutoCAD Computer Aided Design (CAD) programs to create their projects in a digital environment.
3. Using AutoCAD programs to animate designs.

Students interested in the area of Engineering and Architecture are encouraged to enroll in this course.

Advanced Design TEC321/322 1 Cr Elective 11-12

**Recommended: Successful completion of Design/Drafting*

This is the course for the serious design student. Computer generated drawings are used in this class to express ideas. Architectural students and 3D students are encouraged to take this studio style class to further their portfolios. Field trips, guest speakers and statewide competitions will be included within this course.

PRINCIPLES OF ENGINEERING & MATERIALS SCIENCE

Introduction to Engineering TEC401/402 1 Cr Elective 9-12

“Project Lead The Way”

**Recommended: Successful completion of Algebra 1 or Integrated Math 1 or taken concurrently.*

This course introduces students to the design process and the tools used in product development. Students will experience first-hand the activities in which engineers engage throughout the design cycle. Development of design briefs, sketching, 3D solid modeling, and prototyping through computer-aided drafting are part of the course. Students will have the opportunity to learn ways in which design techniques apply to many fields such as healthcare, business, art and animation, manufacturing, and engineering. Problem solving and math as it applies to products and services for today’s society are emphasized. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.

Principles of Engineering TEC411/412 1 Cr Elective 10-12

“Project Lead The Way”

**Prerequisite: Successful completion of Intro to Engineering, successful completion of Geometry or Integrated Math 2 or taken concurrently*

Students will experience engineering and design technology and use various technological systems and manufacturing processes that demonstrate ways in which engineers and technicians use math, science and technology to benefit people. This course will be a mix of hands-on and academic activities including computer-aided design projects, research activities, case studies, team product development, and discussions on the social and political consequences of technological change. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.

Materials Science TEC421/422 1 Cr Elective 9-12

Materials make modern life possible, from the polymers in the chair you sit on and the metal ball point pen you write with, to the concrete that is used for all roads and buildings. All these items are products of Materials Science and Technology. Materials Science involves: designing, choosing, testing and using materials such as metals, polymers, ceramics and composites. Making glass from sand, designing and casting metals, analysis of metals, as well as developing and destructive testing of concrete are a few of the 66 different experiments in this class. Students interested in careers in Science, Engineering, or Art and Technology will benefit from the knowledge gained in Materials Science. This program is recognized and receives support from the University of Wisconsin’s School of Engineering.

Civil Engineering & Architecture
"Project Lead The Way"

TEC431/432

1 Cr Elective 11-12

**Prerequisite: Successful completion of Introduction to Engineering or Principles of Engineering, successful completion of Geometry or taken concurrently*

In this class you will learn about Civil Engineering and Architecture, using the design process to solve real world problems and apply your creative skills to hands-on-projects. You will use state-of-the-art software to design residential and commercial buildings. This course covers topics such as the roles of civil engineers and architects, project planning, site planning, building design, project documentation and presentation, and interior design. Students are responsible for course supplies and materials. This course is part of the district initiative in Engineering known as Project Lead The Way. College credit is available.

****Additional courses offered in Engineering at schools other than West. (See your counselor)**

| | | | |
|---|----------|----------------|-----------------------|
| • Aerospace Engineering | 1 credit | Elective 11-12 | Memorial |
| • Engineering Design and Development | 1 credit | Elective 12 | Memorial |
| • Civil Engineering & Architecture | 1 credit | Elective 11-12 | LaFollette & Memorial |
| • Advanced Civil Engineering & Architecture 2 | 1 credit | Elective 11-12 | LaFollette |
| • Digital Electronics | 1 credit | Elective 10-12 | East |
| • Computer Integrated Manufacturing | 1 credit | Elective 11-12 | East |

TRANSPORTATION

Consumer Auto

TEC503

1/2 Cr Elective 9-12

**Fee: \$15*

This course is designed for the student who would like to own and maintain a personal vehicle. The course covers basic car care, under-hood inspection (fluids, belts, hoses), removal and replacement of common parts (wiper blades, bulbs, fuses), cooling system maintenance, battery/charging system diagnosis, lubrication system maintenance, tire information, brake inspection, minor ignition system maintenance (spark plugs, wires, firing order), car buying, car insurance, and service information. Students are responsible for course supplies and materials.

Outdoor Power Equipment Technology

TEC518

1/2 Cr Elective 9-12

**Fee: \$15*

Students will study the theory and operation of two- and four-stroke engines. They will gain hands-on experiences by disassembling, analyzing, and reassembling a small engine. Students will be encouraged to bring in repair projects from home. The course integrates and reinforces basic science principles and mathematical concepts while providing hands-on experiences. Students are responsible for course supplies and materials.

Automotive Technology 1/Engine Systems

TEC537

1/2 Cr Elective 9-12

**Prerequisite: Successful completion of Outdoor Power Equipment Technology or Consumer Auto*

**Fee: \$15*

Automotive Technology 1 is an introduction to basic engine construction and operation. Students will disassemble an engine to study engine components, operation, testing procedures, and engine trouble diagnosis. Students will study the following automotive engine systems: cooling, lubrication, fuel, electrical, and ignition. Students are responsible for course supplies and materials.

Automotive Technology 2

TEC538

1 Cr Elective 10-12

**Prerequisite: Successful completion of Automotive Technology 1/Engine Systems*

**Fee: \$15*

This course is designed for students interested in entering the automotive profession or gaining a solid foundation of the automotive field. Students will learn how to diagnose and repair electrical/electronic systems, brake systems, suspension and steering systems, and engine performance systems. The three Cs of auto repair will be emphasized: Concern, Cause, and Correction of system problems. If this course is taken at Memorial, it is considered the first year of the Automotive Youth Apprenticeship Program. Students will be required to join SkillsUSA student organization as part of this course. Students are responsible for course supplies and materials.

****Additional courses offered in Transportation at schools other than West. (See your counselor)**

| | | | |
|---|----------|----------------|-----------------------------|
| • Auto Technology 3 | 1 credit | Elective 11-12 | East, LaFollette & Memorial |
| • Auto Technology 4/Advanced Engines | 1 credit | Elective 11-12 | LaFollette & Memorial |
| • Automotive Youth Apprenticeship Prog. | 1 credit | Elective 11-12 | Memorial |