Program Elements – Definitions and Structure

Types of Programs

MATC offers numerous courses, programs, and training opportunities designed to meet the needs of the Milwaukee area community. There are currently approximately 175 programs:

- Associate in Arts program
- Associate in Science program
- Associate in Applied Arts program
- Associate in Applied Science programs
- Technical Diploma programs
- Embedded Technical Diploma and Embedded Pathway Certificate programs
- Internal Certificate and Advanced Technical Certificate programs
- Adult High School Diploma program
- Apprentice programs

Defining the Structure of a Program

The *structure* of an academic program includes the following elements:

- Type of program, e.g.,
  associate degree, college transfer, short-term program (less than a year in length), one-year diploma, two-year diploma, internal certificate, embedded pathway certificate, advanced technical certificate, and apprentice program;

- Numeric code: e.g.,
  10-101-1, 20-800-1, 30-106-1, 31-409-1, 32-439-1, 00-107-1, 01-805-1, 61-101-1, 50-423-1;

- Official program title;

- Courses with their associated data (department, subject, course number, title, number of hours by instructional method, credits);

- Sequence of the courses in the program (term recommended for full-time students), e.g., "Semester 1", or "Quarter 1"; and

- Function that the course serves in the program, e.g., "Technical", "Support", "General Education", or "Elective". *Technical* courses generally teach "hands-on" skills or skills that are required for entry-level positions in the occupation. *Support* courses provide supporting knowledge and skills that enable the student to perform the hands-on skills.

Program requirements refers to *the course requirements that students are expected to complete in order to graduate from a program.* With the exception of internal certificates, the structure of associate degrees, technical diplomas, apprentice programs, advanced technical certificates and embedded programs are defined by the state.

Program Elements — Content

Occupational Analysis/DACUM (**D**eveloping **A C**urricul**UM**)

In a broader context of developing program content, ***curriculum development*** can be referred to as *the process of using products created from an analysis of the occupation to define/revise the competencies of an occupational program.*

The most common method used to conduct an occupational analysis in the technical college system is the D.A.C.U.M. process (**D**eveloping **A C**urricul**UM**). The result of this process is a job profile, listing the duties and tasks, the background knowledge, attitudes, and skills expected of incumbent workers in the occupation. Using this as a framework, a list of competencies is developed that would address the technical, supportive, and General Education content needed in order to prepare entry-level workers.

Program Goals and Outcomes

These elements provide the structure and path for assessing student success, as well as for continual improvement of the program:

- Program goals;
- A set of defined outcomes for each program goal, with a plan for assessing them;
- Assessment instruments, a methodology for administering them, and defined criteria;
- A means by which assessment results are disseminated, reviewed, and acted upon.

  Further information can be found in the MATC *Student Outcomes Assessment Plan.*

General Education Component

General Education is a central component of MATC programs and courses. The General Education requirements have been established to provide the competencies needed in the core areas of communication; quantification and science; problem solving; interpersonal skills; cultural diversity; professionalism; and information technology (the MATC Core Abilities). These essential competencies are embedded in specific General Education courses (courses in 800-numbered departments) and in all of the programs throughout the college that are one year or more in length. This has been done to ensure that students possess and demonstrate the skills and knowledge to be active participants in the diverse and complex world in which they live and work.

The philosophy of General Education at MATC is:

General Education fosters personal development, occupational competence, and community responsibility by developing students' knowledge and competencies in the liberal arts and sciences.

Programs — Structure

AA (Associate in Arts) and AS (Associate in Science) Degree Programs

Per legislative statute, MATC is one of three technical colleges authorized to provide two-year college parallel degrees. Associate in Arts or Science degree programs are designed for persons who intend to complete the requirements of the associate degree and transfer to a four year college or university. Curricula of these programs consider the course requirements of the colleges or universities where students are most likely to transfer. To meet this intent, the curriculum includes specific courses that are required, as well as choices for students in the selection of courses within defined disciplines. A total of 64 credits are required in the following distribution:

Program Requirements — AA and AS		
English	**9**	**6**
ENG-201 English 1		
ENG-202 English 2		
AA students select an additional three-credit 200-series ENG course.		
Humanities	**9**	**6**
SPEECH-201 Elements of Speech		
Additional credits are selected from 200-series courses in the humanities — for example, literature, history, philosophy, ART 201, or speech courses.		
History — AA students select a 200-series HIST courses	**6**	**--**
Social Science — AA students select three courses with no more than one from each of the following categories:	**9**	**--**

1.   ECON-201   Principles of Microeconomics
        ECON-202   Principles of Macroeconomics
 	
  2.   SOCSCI-203 Introduction to Sociology
  3.   PSYCH-231   Introductory Psychology
  4.   SOCSCI-221 American National Government and Politics Today
        SOCSCI-222 American State and Local Government		

History and Social Science —	**--**	**6**
At least one course from two subjects: ECON, HIST, PSYCH, and SOCSCI		
Computer Literacy	**3**	**3**
A 200-series course in computer literacy, e.g		
MATH-270 Computer Applications for the Liberal Arts and Sciences		

Program Requirements — AA and AS		
MATH-271 Computer Mathematics 1		
Mathematics	**4**	**--**
200-series MATH courses, MATH-201 College Algebra or above		
Natural Science —	**7**	**--**
200-series NATSCI courses, with four credits in a laboratory science		
Mathematics and Natural Science —	**--**	**25**
200-series MATH courses, (MATH-231 Analytic Geometry and Calculus 1, or higher-level calculus course); at least one 200-series course with laboratory from each of two areas of NATSCI: chemistry, biology, earth sciences, and physics.		
Physical Education	**3**	**3**
PHYED-210 An Active Approach to Wellness and Fitness		
Additional Electives	**14**	**15**
200-series courses are selected from these subjects: ECON, ENG, FLANG, HIST, MATH, MUSIC, NATSCI, PHYED, PSYCH, SOCSCI, or SPEECH.* At least one year (eight credits) of foreign language (FLANG) is strongly recommended in partial fulfillment of this elective requirement. Note: A maximum of six credits may be selected from 100-series courses		
Total Credits	**64**	**64**

General Education Requirement in AA and AS Programs

General Education areas for the Associate in Arts and Associate in Science degrees include Communication, Social Sciences, Computer Literacy, Mathematics, Natural Science, Humanities (including Art), and Physical Education. If students plan to transfer to a four-year institution after they complete a Liberal Arts and Sciences associate degree, they need to inquire with the particular institution about transfer of the courses they plan to complete for the degree. The following table indicates particular courses or the breadth of options for selecting courses to meet the General Education requirements:

General Education Areas	**Credits**
Communication	**6 credits**
Social Science	**3 credits**

Behavioral Science	3 credits
Math and/or Science	3 credits
Additional General Education	6 to 15 credits

**AAS (Associate in Applied Science) and
AAA (Associate in Applied Arts) Degree Programs**

Associate degree programs are developed to assist persons preparing for, or advancing in, an occupation. Curricula of associate degree programs are designed to reflect statewide competency requirements for a target job(s) which define the occupational program. Applied Associate degree programs require a minimum of 60 semester credits. Programs with more than 70 credits in the curriculum require written approval by the WTCS President when needed to meet licensure, certification, and other requirements. Curricula with more than the maximum credits shall reflect the additional credits in the technical studies.

AAS and AAA degree programs consist of courses identified in each of the function categories listed in the table below. Associate degree programs are designed to provide students who attend full time the opportunity to complete the courses within a two-year period. Since a "load" of 16 credits a semester is the norm, an ideal two-year curriculum would have a total of approximately 64 credits.

Function	Description	AAS/AAA
Technical	The Technical Studies category includes courses that are specific to, or support the development of, technical skills and knowledge.	**36-49 credits**
General Education	Courses with content that provides opportunities to develop knowledge and skills in communication; thinking and problem solving; personal awareness; cultural diversity; quantification and science; and information and technology. *(See description and details below.)*	**21-30 credits**
Elective	Courses selected by the student, or transferred in from previous coursework if it meets the advanced standing policy of the college.	**0-6 credits**
Total		**60-70 credits**

General Education Requirement in AAA and AAS Programs

The completion of an AAA (Associate in Applied Arts) or an AAS. (Associate in Applied Science) degree requires a minimum of 21 credits in General Education, depending upon the program. These courses usually fall into five categories and can be selected from 100- or 200-series courses.

Students may take these courses prior to being admitted to a program. But as some programs require specific courses, students are cautioned to obtain approval from the counselor. If a student has completed previous college coursework, an evaluation of their transcript will determine if any of those courses meet these requirements. If the student plans to transfer to a four-year college or university after they complete an associate degree, they should consider the 200-series course options, as these generally transfer to four-year institutions

100-Series Courses

These courses are taken to develop AAS/AAA degree competencies for employment — emphasizing writing, speaking, and societal skills. Four-year colleges may accept the 100-series General Education courses. Some AAS degree programs require specific 100- or 200-series courses.

200-Series Courses

These courses are taken as part of an AA or AS degree or to match requirements for a baccalaureate degree in a college transfer situation. Some AAS degree programs require specific 200-series courses to fulfill graduation requirements. 200-series courses also satisfy the requirement for six credits of electives in an associate degree program.

English and Speech: 6 credits required

(Both courses must be 100-series or 200-series.)

ENG-151 Communication Skills 1 and	ENG-201 English 1 and
ENG-152 Communication Skills 2	SPEECH-201 Elements of Speech 1
	or any 200-series ENG or SPEECH course

Sociology: 3 credits required

SOCSCI-197 Contemporary American Society	SOCSCI-203 Introduction to Sociology
	or any 200-series SOCSCI course

Psychology: 3 credits required

PSYCH-199 Psychology of Human Relations	PSYCH-231 Introductory Psychology
	or any 200-series PSYCH course

Mathematics and Natural Sciences: 3 credits minimum required

One course: specific course varies by program	Equivalent 200-series courses as determined by the division
Additional General Education: 6 credits required	
Two courses: specific courses vary by program	Equivalent 200-series courses as determined by the division

Technical Diploma Programs

The structure of a technical diploma program consists of 100-series and/or 300-series courses in the *technical, support*, and *General Education* categories. Per WTCS guidelines, the sum of credits in the support and General Education categories may not exceed 30% of the total program credits in technical diplomas, and may not include elective courses. The option of selecting a 100-series or an equivalent 200-series course may also be provided in the structure of the program.

Technical Diploma programs are coded and classified according to length.

- Diplomas of Less than One Year (Code 30) — a minimum of two (2) credits and a maximum of 25 credits.
- One Year Diplomas (Code 31) — a minimum of 26 credits and a maximum of 54 credits.
- Two Year Diplomas (Code 32) — a minimum of 55 credits and a maximum of 70 credits.

General Education Requirement in Diploma Programs

Technical diplomas *one year or more in length* are required to include at least one *General Education* course, with a minimum of two credits*.* The remaining course credits may be in the *technical* or *support* category, provided that the General Education and support credit total does not comprise more than 30% of the total credits for the program.

Embedded Technical Diploma and WTCS Pathway Certificate Programs

The Embedded Technical Diploma Approval and Embedded WTCS Pathway Certificate Recognition Process results in the creation and approval of one or more technical diplomas or recognized certificates that in and of themselves provide an occupational skill set in demand by employers.

Embedded credentials are educational opportunities structured within existing approved Associate in Applied Arts (AAA), Associate in Applied Science (AAS) degrees and/or Short Term, 1- or 2-year technical diplomas for Career Pathways. Embedded technical diplomas and pathway certificates are configured such that the courses lead to a set of competencies that are valued by employers and leads to employment.

The table below indicates the possible embedded diploma(s) or pathway certificates from "Already Approved Degrees".

Embedded Diploma(s)	Already Approved Degrees			
	AAA/AAS	2-Year Technical Diploma	1-Year Technical Diploma	Short Term Technical Diploma
2-Year Technical Diploma	1	None	None	None
1-Year Technical Diploma	1 or more	1 or more	None	None
Short Term Technical Diploma	1 or more	1 or more	1 or more	None
Embedded Pathway Certificate	1 or more	1 or more	1 or more	1 or more

Embedded technical diplomas and pathway certificates must use the existing courses within an existing State approved degree program curriculum. There must always be a one to one (1:1) relationship between a pathway certificate and an already approved degree program even if the courses within an embedded technical diploma or a pathway certificate are the same courses that are approved in more than one already approved degree. An already approved degree may have more than one embedded technical diploma or pathway certificate.

Apprentice Programs

Apprenticeship programs are developed to assist registered indentured apprentices to acquire the related technical knowledge and skills to augment the planned on-the-job experiences for all aspects of their trade. Apprenticeship programs with three or more years of on-the-job training have a minimum of 400 hours of paid related instruction. The related instruction will be offered at a minimum of four (4) hours a week or equivalent.

Apprenticeship programs offered in two or more districts maintain an 80% common curriculum core as identified by industry, Bureau of Apprenticeship Standards (BAS), and state and local trade advisory committees.

Technical Courses — Minimum 90%

This refers to the content areas of trade and technical information; skill development; applied math; drawing and drawing interpretation (for the specific occupations); as identified by the state apprentice-able trade's advisory committee. Up to 20% of the content may be determined by the local apprentice-able trade's advisory committee.

Support Courses — Maximum 10%

Supportive courses include the content areas of employer/employee relations, science, and communications (report writing, speaking, listening).

Advanced Technical Certificate Programs

Advanced Technical Certificates are designed to provide instruction for persons currently employed. The content offered in the certificate extends beyond that provided in associate degrees, diplomas, and apprenticeship programs. Advanced Technical Certificates are *approved by the WTCS for three years*. After that period, the division completes the state procedures to request continuation. The structure of these certificates conforms to the following guidelines.

Advanced Technical Certificate Requirements

Total credits: 9 to 12;

Up to three credits may be drawn from existing approved courses.

At least six of the credits:

- Cover technical content *beyond* what is offered in an associate degree program;

- Are at the same level of rigor as associate degree courses;

- Follow the same ratio of credit to hours as associate degree courses; and

- May cover newly-emerging technology or content at greater breadth than an approved associate degree program.

MATC Certificate programs

A single course or several courses may form a curriculum to serve specialized needs for updating workers. These certificates have a title related to a unique aspect of an existing program, or a broader base of related jobs. Certificates sometimes are developed to offer students — who do not complete a full degree or diploma program — a record of having completed a group of courses that relate to a job specialization or occupational area.