

TMCC's JumpStart Courses, Degree Pathways, and Required Teaching Credentials

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Requirements for TMCC Concurrent Dual Credit Courses at High School Sites

- Course credit totals appear in the slides below.
- One college credit = 15 hours of required seat time.
- Each course may span a Fall or Spring term, but not both.
- Each course can vary in length within one term as needed.
- Instructor credentials will be evaluated by TMCC.
- Instructors must have official transcripts sent to TMCC.
- Instructors must use the official TMCC syllabus.
- Course materials must be approved by the Department Chair.

Suggested Pathways for Concurrent Education Students

The following courses are ideal for degrees in these popular pathways. Other courses are required, but the following are excellent starting points for high-school students. Details about most of them appear in the slides below. Most can be offered at the high school, though classes with labs will need to be offered at the college.

Allied Health Professions	→	BIOL 190 A/L (4 cr.): Intro. to Cell & Molecular Biology (with lab)	ENG 100/101 (3 cr.): Composition I	MATH 126 (3 cr.): Pre-Calculus I	PSY 101 (3 cr.): Intro to Psychology
Manufacturing AAS	→	DFT 110 (3 cr.): Print Reading for Industry	ENG 100/101 (3 cr.): Composition I	MPT 140 (3 cr.) Quality Control	ELM 110 (4 cr.): Electric/Electronic Circuits
Transfer AA in Business	→	IS 101 (3 cr.): Introduction to Information Systems	ENG 100/101 (3 cr.): Composition I	MATH 126 (3 cr.): Pre-Calculus I	PSY 101 (3 cr.) <i>or</i> SOC 101 (3 cr.): Principles of Sociology
Transfer AA in Arts and Social Sciences	→	PSC 101 (3 cr.): Introduction to American Politics	ENG 100/101 (3 cr.): Composition I	MATH 120 (3 cr.): Fundamentals of College Mathematics	Fine Arts or Social Science course (3 cr.), e.g. ART 100, 101, PSY 101, SOC 101
Transfer AS in STEM	→	CHEM 121 (4 cr.): General Chemistry I (with lab)	ENG 100/101 (3 cr.): Composition I	MATH 126 (3 cr.): Pre-Calculus I	PSC 101 (3 cr.): Intro to American Politics
AS Community Health Science	→	CHS 101 (3 cr.): Introduction to Community Health Science	CHS 102 (3 cr.): Foundations of Personal Health and Wellness	ENG 100/101 (3 cr.): Composition I	MATH 126 (3 cr.): Pre-Calculus I
AS Engineering	→	ENGR 100 (3 cr.): Intro to Engineering Design	ENG 100/101 (3 cr.): Composition I	MATH 126 (3 cr.): Pre-Calculus I	MATH 181 (4 cr.) Calculus I

Course Prefix definitions appear on slide 8

Practical Dual Credit Courses

Following below are details on 100-level courses that TMCC offers each semester, and that partner high schools may wish to offer on their own campuses, where credentialed instructors are available. This list is not exhaustive. Further options are available, but these courses are among the most common to TMCC's degree programs, and many are guaranteed transfer courses within NSHE.

Each slide describes the course, its content, its degree/career destinations, and what credential is needed to teach that course.

A Foundational College Success Course

Course

EPY 101 (3 cr.)

Educational Psychology: for Career, and Personal Development

Course Content

Provides a foundation for student success by introducing proven strategies in communication, critical thinking, and college success methods. Study skills, career exploration and personal development will also be explored. A good course to take before students come to college.

Degree Paths

Counts towards the Human Relations General Education requirement for AAS degrees and towards electives in the AA and AS General Transfer degrees and AGS degree.

Credential Required to Teach

Masters in Counseling (preferred), Education, Social Work, Psychology, Human Development

Courses in English, Communication, and Arts

Course	ENG 101 (3 cr.) Composition I	COM 113 (3 cr.) Fund. of Speech Communications	ART 100 (3 cr.) Visual Foundations	ART 101 (3 cr.): Drawing I	MUS 121 (3 cr.) Music Appreciation
Course Content	<p>Writing intensive course designed to strengthen college level writing skills, with particular attention to persuasion, analysis, synthesis and an introduction to research methodologies. Drafting, revising and editing are emphasized. Conventions of standard English are reviewed. Critical reading strategies of college level texts are developed.</p>	<p>Principles and theories of speech communication. Participation in public speaking and interpersonal communication activities.</p>	<p>Explores visual forms and contemporary concepts through a variety of media, presentations and discussions. Transfers to UNR/UNLV. Satisfies UNR Fine Arts core curriculum.</p>	<p>An introductory studio course emphasizing a disciplined foundation in drawing concepts based on visual observations.</p>	<p>Historical and cultural background of music. A general course in music appreciation open to all students. Representative works presented and analyzed. Satisfies the UNR Fine Arts core curriculum.</p>
Degree Paths	<p>All transfer AA and AS degrees and requirement for many AAS degrees that stack into a BAS.</p>	<p>AA Communications, Social Science GE for AA and AS Transfer, Communications GE for AAS.</p>	<p>Fine Arts GE for AA and AS Transfer and AAS and AGS, degree requirement for AA Fine Arts</p>	<p>Fine Arts GE for AA and AS Transfer, AAS, and AGS, degree requirement for AA Fine Arts</p>	<p>Fine Arts GE for AA and AS Transfer, AAS, and AGS, degree requirement for AA Fine Arts - Music,</p>
Credential Required to Teach	<p>Masters degree with 18 graduate credits in the discipline</p>				

Courses in Social Science, History, and Political Science

Course	PSY 101 (3 cr.) General Psychology	SOC 101 (3 cr.) Principles of Sociology	HIST 105 (3 cr.) European Civilization to 1648	HIST 106 (3 cr.) European Civilization since 1648	PSC 101 (3 cr.) Introduction to American Politics
Course Content	Survey of the basic foundations of psychology with emphasis on psychological theories, research methods and principles of behavior.	Sociological principles underlying the development of culture, structure and function of society, human groups, institutions, deviance, stratification and social change. Satisfies UNR Social Science core curriculum.	Survey of the development of Western civilization up to 1648.	Survey of the development of Western civilization from 1648 to the present.	A survey of American national, state and local governments. Includes Nevada's constitution, government, and contemporary issues. Fulfills US and Nevada Constitution requirements.
Degree Paths	All transfer AA and AS degrees and recommended for AA Business and many allied health programs.	All transfer AA and AS degrees and recommended for AA Business and many allied health programs.	Social Science GE for AA and AS Transfer, AAS and AGS.	Social Science GE for AA and AS Transfer, AAS, and AGS.	Social Science GE for AA and AS Transfer, AAS, and AGS. Satisfies U.S. and NV Constitution requirement.
Credential Required to Teach	Masters degree with 18 graduate credits in the discipline				

Career and Technical Education Courses

CTE Course

Course Content

Degrees and Career Paths

Credential Required to Teach

IS 101 (3 cr.) Introduction to Information Systems	BUS 107 (3 cr.) Business Speech Communications	Many CTE Courses may be offered with the appropriate post-secondary technical credentials. Course prefixes are below.	
<p>An introduction to computer terminology, hardware and application programs for management information systems. Students are introduced to business, industry and education applications of popular software using spreadsheets, word processors, and databases. "Hands-on" experience is provided through student use of open labs.</p>	<p>Provides business students and career professionals with intensive coaching in listening skills, oral grammar and effective speech construction. Students will practice delivering a variety of individual and small group presentations necessary to successful on-the-job communications.</p>	<p>ACC - Accounting AC - Air Conditioning AUTO - Automotive BUS - Business CSCO - Cisco CIT - Comp. Info. Tech. CRJ - Criminal Justice CUL - Culinary Arts DT - Diesel Tech. DFT - Drafting ECE - Early Childhood Ed.</p>	<p>ECON - Economics EDU - Education ELM - Elec. Mech. Tech. EMS - Emergency Med. FS & FT - Fire Sci. /Tech. GRC - Graphic Com. HIT - Health Info. Tech. MPT - Man. & Prod. Tech. MT - Mechanical Tech. MTT - Machining Tech. WELD - Welding</p>
<p>AA Business AA Entrepreneurship</p>	<p>AAS Business AA Hospitality & Tourism Mgmt. AAS Massage Therapy Entrepren. AAS Office Management AAS Personal Trainer Entrepren.</p>	<p>AAS Degrees, Certificates of Achievement, and Skills Certificates provide meaningful career pathways for students in the areas listed above.</p>	
<p>Associate degree in the CTE discipline preferred; Recent industry experience or certifications considered; Transfer courses require a master's degree</p>			

Math for CTE and Business

CTE Math Course

Course Content

Math for
CTE and
Business

Degree Paths

Credential Required to Teach

Embedded Math	BUS 117 (3 cr.) Business Calculations & Methods	MATH 120 (3 cr.) Fundamentals of College Math	MATH 126 (3 cr.) Pre-Calculus I	MATH 176 (3 cr.) Intro. Calculus for Business & Soc. Sci
<p>Many AAS degrees in CTE have the required Math component embedded directly into the technical courses throughout the program, including: Apprenticeship AC, AUTO, DA, DFT, DT, ELM, MPT, MTT, and WELD</p>	<p>Practical business math applications including: bank reconciliations, present value, markup and markdowns, simple and compound interest, trade and cash discounts, sales and property taxes, payroll, understanding overhead and analyzing financial reports.</p>	<p>Covers the mathematical concepts particularly relevant to non-science majors. Topics covered include problem-solving, topics in finance, probability, statistics, and additional real-world applications. Satisfies UNR core curriculum.</p>	<p>The study of functions, their properties, their graphs, and applications including polynomial, radical, rational, exponential and logarithmic functions. The course also covers the solving of equations, systems of equations, and inequalities.</p>	<p>Topics covered include graphing functions, derivatives, integrals, applications, the Fundamental Theorem of Calculus. This course is designed for business and social sciences.</p>
<p>AAS degrees in: Construction Tech., Dental Assisting, Manufacturing Tech, Transportation Tech.</p>	<p>AAS Business AAS Business - Office Mgmt., Personal Trainer, Massage Therapy specialties</p>	<p>Alternative for AAS Business and its specialties; BAS Logistics Op. Mgmt., AAS Fire, AAS EMHS</p>	<p>AAS Computer Information Tech.; BAS Cyber-Physical Manufacturing</p>	<p>AA Business (Transfer Business degree)</p>
<p>Embedded Math - Associate degree in CTE area preferred; recent industry experience and certifications BUS 117 - Masters degree in Finance (preferred), Business, or Management Transfer Math - Masters degree in Mathematics</p>				

Transfer Math Course Sequence for STEM and Some Allied Health Degrees

Math Course

Course Content

Math
for
STEM

Degree Paths

**Credential
Required to Teach**

MATH 126 (3 cr.) Pre-Calculus I	MATH 127 (3 cr.) Pre-Calculus II	MATH 181 (4 cr.) - Calculus I	MATH 182 (4 cr.) Calculus II	MATH 283 (4 cr.) Calculus III	MATH 285 (3 cr.) Differential Equations
The study of functions, their properties, their graphs, and applications including polynomial, radical, rational, exponential and logarithmic functions. The course also covers the solving of equations, systems of equations, and inequalities.	A continuation of MATH 126. It includes the study of circular functions, their graphs and applications, analytic trigonometry, the coordinate geometry of lines and conics and elementary vector algebra.	Functions, the derivative, differentiation of functions, applications of the derivative, understanding the definite integral, finding integrals and applications of integrals. Topics viewed geometrically, numerically and algebraically.	Topics include a continuation of the definite integral, finding integrals and applications of integrals, differential equations and approximations of functions with simpler functions. Throughout the course topics viewed geometrically, numerically and algebraically.	Topics include vectors, differentiating and integrating functions of many variables, optimization, parametric curves and surfaces, line integrals, flux integrals and vector fields. Topics will be viewed geometrically, numerically and algebraically.	Theory and solving techniques for constant and variable coefficient linear equations and a variety of non-linear equations. Emphasis on those differential equations arising from real world phenomena.
AS Nursing AS Dietetic Tech. BS Dental Hygiene	AS Biology AS Environmental Science	Recommended for AS Biology and AS Environmental Science	AS Chemistry	AS Computer Science	AS Engineering AS Mathematics
Masters degree in Mathematics					

Overview of Math Pathways Starting Points

Math Course	Math for Liberal Arts and Social Sciences		Math for Transfer Business		Math for Sciences and some Allied Health		
Course Content	MATH 120 (3 cr.) Fundamentals of College Math	MATH 126 (3 cr.) Pre-Calculus I	MATH 176 (3 cr.) Intro. Calculus for Business & Soc. Sci	MATH 126 (3 cr.) Pre-Calculus I	MATH 127 (3 cr.) Pre-Calculus II	MATH 181 (4 cr.) - Calculus I	
	mathematical concepts particularly relevant to non-science majors. Topics covered include problem-solving, topics in finance, probability, statistics, and additional real-world applications.	Functions, their properties, their graphs, and applications including polynomial, radical, rational, exponential and logarithmic functions. The course also covers the solving of equations, systems of equations, and inequalities.	Topics covered include graphing functions, derivatives, integrals, applications, the Fundamental Theorem of Calculus. This course is designed for business and social sciences.	Functions, their properties, their graphs, and applications including polynomial, radical, rational, exponential and logarithmic functions. The course also covers the solving of equations, systems of equations, and inequalities.	A continuation of MATH 126. It includes the study of circular functions, their graphs and applications, analytic trigonometry, the coordinate geometry of lines and conics and elementary vector algebra.	Functions, the derivative, differentiation of functions, derivative applications, the definite integral, finding integrals, applications of integrals. Topics viewed geometrically, numerically and algebraically.	
Degree Paths	AA's in Anthropology, Communication Studies, Early Childhood, English, Fine Arts, Graphic Com., HDFS, History, Political Science, Psychology	AA Business		AS Nursing AS Dietetic Tech. BS Dental Hygiene	AS Biology AS Chemistry AS Computer Sci.	AS Engineering AS Env. Science	
Credential Required to Teach	Masters degree in Mathematics						

Academic Division Contacts

Have faculty who want to teach?

- Liberal Arts Division - Ron Marson, rmarston@tmcc.edu
- Business & Social Sciences Division - Amy Williams, awilliams@tmcc.edu
- Life Sciences, Allied Health, & Public Safety Division - Dr. Julie Ellsworth, jellsworth@tmcc.edu
- Math and Physical Sciences Division - Anne Flesher, aflesher@tmcc.edu
- Technical Science Division - Barbara Walden, bwalden@tmcc.edu

Questions?