

College Math Courses Needed by Major [see next page for detailed prerequisites]

Find your degree plan/major in the list below. Then see which Entry-Level College Course is recommended.

THIS IS A GENERAL GUIDE ONLY!

Program requirements can change. Students planning on transferring to a 4-YR University should check that universities specific math requirements for their desired program as it may be different than what is listed here. The student is ultimately responsible for knowing which math course is required for his/her academic goals. Please check your specific program plan either online and/or with your academic advisor.

BCTC Major/Plan/Degree <small>Note: Only Certificates and Diplomas requiring a minimum math level are listed.</small>	Recommended Math Course (Pathway)
ASSOCIATE IN SCIENCE (AS)	
Transfer Pre-Business Major (Accounting, Economics, Marketing, Management, etc.)	College Algebra MAT 150
Transfer Pre-STEM Major (Biology, Physical therapy, Chemistry, Engineering, etc.)	Pre-Calculus MAT 160
ASSOCIATE IN ARTS (AA) or ASSOCIATE IN FINE ARTS (AFA)	
Transfer Pre-Liberal Arts Major (History, Art, Communications, Psychology, Criminal Justice, Sociology, Social Work, etc.)	Liberal Arts Math MA 111
Theater	Liberal Arts Math MA 111
ASSOCIATE IN APPLIED SCIENCE (AAS) [by division]	
• ADVANCED MANUFACTURING AND TRADES	
Electrical Tech, Energy Tech, Engineering and Electronics Tech, Industrial Maintenance Tech	MAT 126
Architectural Tech, Automotive Tech, CAD Tech, Computerized Manufacturing & Machining, Construction Tech, Equine Studies, HVAC, Welding Tech	Technical Math**
• ALLIED HEALTH	
Dental Hygiene, Respiratory Care, Surgical Tech	Technical Math**
Diploma Only: Dental Assisting	MAT062 or MAT065 (no college math required)
Nuclear Medicine, Radiography	College Algebra MAT 150
• BUSINESS, COMPUTER & INFORMATION SYSTEMS	
Business Management & Marketing (Management, Marketing, Real Estate, Equine Bus Mgmt)	College Algebra MAT 150
Computer & Info Tech (Applications, Computer Science, Internet Tech, Network Tech, Programming)	College Algebra MAT 150
Information Management and Design, Library Information Tech (non-transfer only), Medical Information Tech, Office Systems Tech	Technical Math**
Diploma or Certificate Only: Medical Information Tech	MAT062 or MAT065 (no college math required)
• COMMUNICATIONS, HISTORY, LANG & SOCIAL SCIENCES	
Homeland Security (non-transfer only), Human Services, IECE, Criminal Justice (non-transfer only)	Technical Math**
• NATURAL SCIENCES	
BioTech,	Technical Math**
Environmental Science	College Algebra MAT 150
• NURSING	
Nursing Major for Transfer (Associate degree, RN, BSN, 4-year Nursing)	Liberal Arts Math MA 111
Diploma Only: Practice Nursing	MAT062 or MAT065 (no college math required)

Most Efficient College Algebra Path: MAT 55* → MAT 65* → MAT 85* → MAT 150* or MAT 11# → MAT 150

Most Efficient Liberal Arts Math Path: MAT 55 → MAT 75 → MA 111 or MAT 11# → MA 111

Most Efficient Technical Math Path: MAT 55 → MAT 62 or MAT 65 → Technical Math or MAT 11# → Tech Math

* These courses are available as COMBO course pairs for acceleration: MAT 55 & MAT 65; MAT 65 & MAT 85; MAT 85 & MAT 150

** See individual program plans for specific Technical Math Course (MAT 105, MAT 110, MAT 116) required, if any.

MAT 11 covers all entry-level college math prerequisites in an individualized self-paced environment. **Multiple enrollments in MAT 11 may be required based on student progress and prerequisite needs.**

College Level Math Prerequisites by Pathway

TECHNICAL MATH PATHWAY [NON-TRANSFER]

For students pursuing an AAS degree and whose Program only requires a technical math course – MAT105 Business Math, MAT110 Applied Math, MAT116 Technical Math or MAT126 Technical Algebra & Trig

<p>Technical Math Placement Requirements: For MAT105, MAT110 & MAT116: A student must meet at least ONE (1) of these prerequisites</p> <ol style="list-style-type: none"> 1. ACT Math 19 or higher 2. COMPASS Algebra 25 or higher* 3. KYOTE Math 12 or higher* 4. MAT062 <u>OR</u> MAT065 <u>OR</u> MAT075 5. MAT011 ** Block II-T 	<p>Typical AAS Areas requiring Technical Math:</p> <ul style="list-style-type: none"> • Trades and Technologies <ul style="list-style-type: none"> ○ HVAC, Auto, Architectural, CAD, Cosmetology, etc. • Allied Health <ul style="list-style-type: none"> ○ Dental, Human Services, Respiratory, Surgical Tech, Biotech • Information Tech <ul style="list-style-type: none"> ○ Office Systems, Medical Info, Info Management & Design
<p>For MAT126: A student must meet at least one (1) of these prerequisites</p> <ol style="list-style-type: none"> 1. ACT Math 19 or higher 2. COMPASS Algebra 31 or higher* 3. KYOTE Math 18 or higher * 4. MAT065 <u>OR</u> MAT075 5. MAT011 ** Block II-A 	<p>AAS Areas requiring MAT126:</p> <ul style="list-style-type: none"> • Electrical Tech • Energy Tech • Engineering Tech • Industrial Maintenance Tech

* Placing into Tech Math using these scores requires supplemental instruction. To avoid supplemental instruction, a student must meet MA111 placement requirements (see below).

LIBERAL ARTS MATH PATHWAY

For students pursuing any degree (AAS, AA, AS, BA, BS) whose Program or Major requires only MA111/MAT146 Contemporary Mathematics and does not require any calculus courses.

<p>Liberal Arts Math Placement Requirements: A student must meet at least one (1) of these prerequisites</p> <ol style="list-style-type: none"> 1. ACT Math 19 or higher 2. COMPASS Algebra 36 or higher 3. KYOTE Math 22 or higher <u>AND</u> KYOTE Algebra 7 or higher 4. MAT075 <u>OR</u> MAT085 5. MAT011 ** Block II-A <u>OR</u> Block III 	<p>Typical AAS Programs or Transfer Majors requiring Liberal Arts Math:</p> <ul style="list-style-type: none"> • Transfer Liberal Arts Major: <ul style="list-style-type: none"> ○ History, Art, Communication, Psychology, Criminal Justice, Sociology, Social Work, etc. • Transfer Elementary Education (UK) <ul style="list-style-type: none"> ○ Note: Elementary Ed @ ECU requires MAT150 • Nursing (2-YR or 4-YR)
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COLLEGE ALGEBRA/PRE-CALCULUS PATHWAY

For students pursuing any degree (AAS, AA, AS, BA, BS) whose program or major requires MAT150 College Algebra, MAT160 Pre-Calculus, or any calculus course.

<p>College Algebra/Pre-Calculus Placement Requirements: A student must meet at least one (1) of these prerequisites</p> <ol style="list-style-type: none"> 1. ACT Math 22 or higher 2. COMPASS Algebra 50 or higher 3. KYOTE Math 22 or higher <u>AND</u> KYOTE Algebra 14 or higher 4. MAT085 5. MAT011 ** Block III 	<p>Typical AAS Programs or Transfer Majors requiring College Algebra:</p> <ul style="list-style-type: none"> • Business (2-YR or 4-YR): <ul style="list-style-type: none"> ○ Accounting, Economics, Marketing, Management, etc. • Transfer STEM Majors: <ul style="list-style-type: none"> ○ Biology, Physical Therapy, Engineering, Chemistry, etc. • Computer Science (2-YR or 4-YR): <ul style="list-style-type: none"> ○ Applications, Computer Science, Internet, Network • AAS Nuclear Medicine, Radiography or Environmental Science
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**Note: MAT011 is a Competency Based Course that includes content from all KCTCS developmental math courses. It is divided into three major BLOCKS: Block I ≈ MAT055; Block II ≈ MAT062, MAT065, MAT075; Block III ≈ MAT085. Block II has two branches: Block II-T for the Technical Path and Block II-A for the Liberal Arts or College Algebra Path. Multiple enrollments in MAT011 may be required depending on student progress and program requirements.