## Eastern Connecticut State University (ECSU) Embedded Mathematics Courses

## Math Foundations Program

| Level | Name and Number of Math Course | Discipline | \# of Credits (\# of credits applied to 120) | Enrollment Caps |
| :--- | :--- | :--- | :--- | :---: |
| Intensive | MAT 099 - Algebra Essentials | All | $3(0)$ | 20 |
| Embedded | MAT 135P - Math for Liberal Arts Plus | non-STEM | $4(4)$ | 25 |
|  | MAT 139P (formerly MAT 139) - Number Systems Plus | non-STEM | $4(4)$ | 25 |
|  | MAT 155P - PreCalculus Mathematics Plus | STEM | $5(5)$ | 25 |
| College | MAT 135 - Math for Liberal Arts | non-STEM | 35 |  |
|  | MAT 155 (formerly MAT 130) - PreCalculus Mathematics | STEM | $4(4)$ | 30 |
|  | MAT 243 Calculus | STEM | $4(4)$ | 35 |

## Math Foundations Program Flow Chart



- Entry into MAT 135P, MAT 139P, and MAT 155P is based on initial placement or passing MAT 099
- Entry into MAT 135 and MAT 155 is based on initial placement or retaking the placement exam to try to place into these courses.

Mathematics Placement Information

| Level | SAT Math Range | ACT Range | Accuplacer Results |  | Intended Major or Certification | ECSU Math Course | \# of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Elementary Algebra | College Math |  |  | (\# of credits applied to 120) |
| Intensive | 500 or less | 1-17 | Less than 45 |  | All | MAT 099 | 3 (0) |
| Embedded | 510-560 | 18-21 | At least 45 and less than 75 |  | All except Biochemistry, BIO, CSC, EES, MAT, Exploratory/Undecided STEM, ECE, EDU. Secondary Education students should enroll in the course appropriate for their intended major. non-STEM | MAT 135P | 4 (4) |
|  |  |  |  |  | Biochemistry, BIO, CSC, EES, MAT, Exploratory/Undecided STEM STEM | MAT 155P | 5 (5) |
|  | 510 and above | 18 and above | At least 45 | At least 60 | ECE, EDU, Liberal Studies with concentration in ENG, History/Social Sciences or Natural Sciences non-STEM | $\begin{aligned} & \text { MAT 139P } \\ & \text { (formerly 139) } \end{aligned}$ | 4 (4) |
| College | 570 and above | 22 and above | At least 75 | Less than 60 | All except Biochemistry, BIO, CSC, EES, MAT, Exploratory/Undecided STEM, ECE, EDU. Secondary Education students should enroll in the course appropriate for their intended major. non-STEM | MAT 135 | 3 (3) |
|  | 570-610 | 22-23 | At least 75 | Less than 60 | Biochemistry, BIO, CSC, EES, MAT, Exploratory/Undecided STEM STEM | MAT 155 (formerly 130) | 4 (4) |
|  | 620 and above | 24-36 | At least 75 | At least 60 | Biochemistry, BIO, CSC, EES, MAT, Exploratory/Undecided STEM STEM | MAT 243 | 4(4) |

## Embedded Course Descriptions for MAT 135P and MAT 155P

## MAT 135P - Math for Liberal Arts Plus

This course offers integrated just-in-time Intermediate Algebra support. Mathematics will be applied to solving practical problems in a variety of disciplines, enhanced by algebraic content and technology skills. Mathematical topics include voting theory, financial mathematics, linear programming, identification numbers, and statistics. Additional topics may include fair division. This course is for non-STEM disciplines only and thus cannot be used to satisfy the Precalculus Mathematics Plus (MAT 155P) or Precalculus Mathematics (MAT 155) prerequisite for Calculus I with Technology (MAT 243).

## MAT 155P - PreCalculus Mathematics Plus

This course offers integrated just-in-time Intermediate through college algebra support. Topics include the study of functions, domain and range, building new functions through algebraic operations, composition of functions, and inverse functions. The course will also include the study of families of functions such as polynomial, rational, radical, exponential, logarithmic, and trigonometric functions. Specifically, students are expected to gain an understanding of algebraic notation, expressions, equations, inequalities and their use in describing and interpreting relationships, functions and function notation, proportional and inversely proportional relationships, and applications of periodic phenomena and trigonometric identities. The use and mastery of graphing technology is an essential aspect of the course. The course is designed for students majoring in STEM disciplines. May also be useful to other quantitative disciplines.

## Common Materials for MAT 135P and MAT 155P

Textbook
Course syllabi
Course content
Course formulas (formulas folder)
Graphing calculator assignments
Required 18 hours in the MAC
Summary of practice exercises
Provide chapter summaries
Instructor information
Common final exam

## Informative ECSU Math Department Websites

Math Foundations Program Information
http://www.easternct.edu/mathematics/math-foundations-program/
Mathematics Placement Information
http://www.easternct.edu/mathematics/math-placement-information-commencing-summer-2014/

## MAT 135P Resources Page

http://www.easternct.edu/mathematics/math-135p-math-for-liberal-arts-plus/

## MAT 155P Resources Page

http://www.easternct.edu/mathematics/math-155p-precalculus-mathematics-plus/

## Contact Information

Dr. Kim Ward
email: wardk@easternct.edu

