COURSE OUTLINE : MATH 30E
D Credit – Degree Applicable
COURSE ID 010424
Created: FEBRUARY 2019
Revision: MARCH 2021

COURSE DISCIPLINE : MATH

COURSE NUMBER : 30E

COURSE TITLE (FULL) : Intermediate Algebra and Pre-Statistics

COURSE TITLE (SHORT) : Inter Alg & Pre-Stats

ACADEMICA SENATE DISCIPLINE: Mathematics

CATALOG DESCRIPTION

MATH 30E is the final part of a three-part Intermediate Algebra course for Statistics and Liberal Arts Math (SLAM). MATH 30AB, MATH 30CD, and MATH 30E are collectively equivalent to MATH 30, Intermediate Algebra and Pre-Statistics. The MATH 30AB, MATH 30CD, and MATH 30E sequence is a three-part course leading to transfer-level SLAM courses MATH 136, MATH 133, MATH 135 and MATH 138. Topics include basic set theory and probability including models.

CATALOG NOTES

Note: This course may not be taken for credit by students who have completed MATH 30, 30+, 130, or 131. A maximum of 6 units will be granted for the MATH 30AB, 30CD, and 30E sequence and any of the following courses: MATH 146, 246A, 246B, 30, or 30+ OR a maximum of 7 units will be granted for the MATH 30AB, 30CD, and 30E sequence and any of the following courses: MATH 101, 119, 120, 219A, 219B, 219C, 220A, 220B, 90, or 90+.

Total Lecture Units:1.50

Total Laboratory Units: 0.50

Total Course Units: 2.00

Total Lecture Hours:27.00

Total Laboratory Hours: 27.00

Total Laboratory Hours To Be Arranged: 0.00

Total Contact Hours: 54.00

Total Out-of-Class Hours: 54.00

Prerequisite: Placement is based on the satisfactory completion of MATH 30CD.

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ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1	MATH	30CD	Intermediate Algebra and Pre-Statistics	Solve equations with one radical;	Yes
2	MATH	30CD	Intermediate Algebra and Pre-Statistics	solve applied problems;	Yes
3	MATH	30CD	Intermediate Algebra and Pre-Statistics	solve equations with one logarithmic or exponential expression;	Yes
4	MATH	30CD	Intermediate Algebra and Pre-Statistics	graph exponential and logarithmic functions.	Yes

EXIT STANDARDS

1 Solve applied problems;
2 apply addition and multiplication rules of probability in problem solving including computing expected value;
3 identify probability models and compute their areas.

STUDENT LEARNING OUTCOMES

1 employ and demonstrate an understanding of basic set theory, probability rules, and properties of various probability models;
2 formulate and analyze mathematical models for a variety of real-world phenomenon and use mathematical and technological tools to determine the veracity of the model.

COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	Set theory • The real number system • Subsets • Complements • Unions and intersections • Counting techniques, permutations, and combinations	8	8	16

2	Probability rules • Addition and multiplication rules • Conditional probability, dependent and independent events • 2-way tables • Expected value • Applications (cards, dice, lottery, odds)	8	8	16
3	Probability models • General discrete probability models • Normal and uniform distributions	8	8	16
4	Affective Domain and Metacognition • Study skills • Test-taking skills	3	3	6
				54

OUT OF CLASS ASSIGNMENTS

1 homework (e.g. problems sets related to course content);
2 project(s) using datasets and technology culminating in a written report (e.g. analyze data provided involving price and quantity of soda and construct a scatter plot and linear regression model using Excel).

METHODS OF EVALUATION

1 quizzes;
2 one examination is required;
3 a comprehensive final examination is required.

METHODS OF INSTRUCTION

- [x] Lecture
- [ ] Laboratory
- [ ] Studio
- [x] Discussion
- [x] Multimedia
- [x] Tutorial
- [x] Independent Study
- [x] Collaboratory Learning
- [x] Demonstration

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- ☐ Field Activities (Trips)
- ☑ Guest Speakers
- ☑ Presentations

TEXTBOOKS

Title	Type	Publisher	Edition	Medium	Author	IBSN	Date
Intermediate Algebra and Pre-Statistics, Custom Published for GCC	Required	Pearson	1	Print	Lehmann, Jay	1323942416	2019