



CATALOG ADDENDUM: MAY 2022

Below are listed additions and corrections to the 2021-22 Bucks County Community College Catalog since its publication. All corrections listed below have been made in the main online catalog sections to which they apply. They do not appear, however, in the PDF version of the full catalog.

SECTION 2: MAJORS AND CERTIFICATE PROGRAMS

[Biology, Associate of Science \(Curriculum Code No. 1003\)](#): The program's goals have been updated to:

Graduates of this program are able to

- explain the unity of life;
- describe the evidence to support the principle of descent from a common ancestor;
- explain the use and distribution of energy in living systems;
- describe the relationship between inheritance, variation and evolution;
- demonstrate techniques to collect data;
- organize data into charts, graphs, or tables;
- interpret data from charts, graphs, or tables compiled from collected data; and
- present data from charts, graphs, or tables compiled from collected data in oral or written form.

[History, Associate of Arts \(Curriculum Code No. 1196\)](#): The History Elective options for the program (subscript F) have changed to: "Choose from HIST 100, 101, 139, 146, 149, 155, 159, 170, 172, 175, 178, 190, 194, 195, 197, 198, 199, 201, 202, 203, 204, 205, 208, 210, 214, 219, or 239.

SECTION 3: COURSE DESCRIPTIONS

[e-Discovery \(LAWS270\)](#): This course, previously an experimental course, has been approved as a permanent course. The Master Course Outline, VII. Required Course Content and Direction, A. Course Learning Goals have been updated:

Students will:

1. analyze the types of forensic collections: Full-forensic, Logical and Targeted;
2. identify eDiscovery tools and their uses;
3. evaluate types of digital evidence;
4. explain factors affecting digital evidence collection;
5. apply U.S. Federal Rules on digital evidence;
6. use the Electronic Discovery Reference Model and software tools to identify and review relevant data to complete Request for Production of Documents and other Discovery requests;
7. explain eDiscovery project management tasks, including sampling and metrics; and
8. explain when to use eDiscovery Consultants, Special Masters, and Forensic Mediators.

[Mathematics for Educators I \(MATH102\)](#): The Master Course Outline for this course has been updated to:

I. Course Number and Title: MATH102 Mathematics for Educators I

II. Number of Credits: 3 credits

III. Number of Instructional Minutes: 2250

IV. Prerequisites: Math Placement Test score of 5 or MATH095 (C or better)

Corequisites: None

V. Other Pertinent Information

A minimum of 70% of a student's grade must be determined from proctored assessments and work. These proctored assessments include tests, quizzes, departmental final exam, or other proctored in-class assignments.

A comprehensive departmental final examination is included in this course. The final exam must be at least 20% of the course grade. Study guides, formula sheets, and other aids may not be used on the final exam.

This course meets the General Education requirement for Quantitative Literacy.

VI. Catalog Course Description

This course provides a preparation in mathematics for students interested in elementary education. Topics include inductive and deductive reasoning, elementary logic, sets, numeration systems, the real number system and its subsets, number theory, and algebraic equations and inequalities.

VII. Required Course Content and Direction

A. COURSE LEARNING GOALS

Students will:

1. solve problems involving elementary logic, inductive and deductive reasoning, patterns and set operations;
2. simplify algebraic expressions;
3. solve linear equations, linear inequalities and quadratic equations;
4. interpret mathematical operations and solutions in different numeration systems, including Hindu-Arabic, Roman, other ancient, and positional numeration systems;
5. perform division and divisibility tests using prime factorizations, greatest common divisors, and greatest common multiples;
6. manipulate real numbers and its subsets mathematically by applying their properties, using equivalence classes, and simplifying expressions involving absolute value and negative exponents; and
7. solve descriptive problems by translating them into mathematical formulas [Quantitative Literacy].

B. PLANNED SEQUENCE OF TOPICS AND/OR LEARNING ACTIVITIES

1. Problem Solving
 - a. inductive reasoning
 - b. deductive reasoning
 - c. patterns and pattern recognition
 - d. estimation and mental math
2. Elementary Logic
 - a. negation
 - b. compound statements and connectives
 - c. truth tables for conjunction, disjunction, conditional, and biconditional

- d. equivalent statements and variations of conditional statements
- 3. Set Theory
 - a. subsets
 - b. set operations
 - c. Venn Diagrams
- 4. Numeration Systems
 - a. Hindu-Arabic, Roman numerals, and other ancient systems
 - b. positional numeration systems and other bases
 - c. operations using the decimal system and other bases
- 5. Number Theory
 - a. factors, factorizations, prime numbers, and composite numbers
 - b. divisibility rules
 - c. greatest common divisor
 - d. least common multiple
 - e. whole numbers, integers, rational numbers, irrational numbers
 - f. order of operations
 - g. exponents and scientific notation
 - h. properties of real numbers
 - i. clock addition
 - j. absolute value
- 6. Algebra
 - a. algebraic expressions
 - b. linear equations, applications and proportions
 - c. linear inequalities
 - d. quadratic equations

C. ASSESSMENT METHODS FOR COURSE LEARNING GOALS

Students will apply mathematical concepts and principles to identify and solve problems through informal assessment (oral communication among students and between teacher and students) and formal assessment (may include homework, quizzes, exams, projects, and comprehensive final).

D. REFERENCE, RESOURCE, OR LEARNING MATERIALS TO BE USED BY STUDENT:

A departmentally-selected textbook will be used. Calculators are not permitted to be used in this course. Details will be provided by the instructor of each course section. See course syllabus.

[Mathematics for Educators II \(MATH105\)](#): The Master Course Outline for this course has been updated to:

MATH105 Mathematics for Educators II

Department of Science, Technology, Engineering & Mathematics: Mathematics

I. Course Number and Title: MATH105 Mathematics for Educators II

II. Number of Credits: 3 credits

III. Number of Instructional Minutes: 2250

IV. Prerequisites: MATH102 (C or better) or Permission of the Department of Science, Technology, Engineering & Mathematics

Corequisites: None

V. Other Pertinent Information: A comprehensive departmental final examination is required for this course.

VI. Catalog Course Description: This course provides a continuation of the mathematics preparation for students interested in elementary education. Topics include graphs, functions, probability, statistics, measurement, and geometry.

VII. Required Course Content and Direction

1. Course Learning Goals

Students will:

1. graph linear and quadratic functions;
2. present data, including frequency distributions, histograms, and stem and leaf plots;

3. calculate measures of central tendency, spread, and standard deviation including a z-score for a data item and a score that is a specific deviation from the mean in a data set;
 4. interpret percentiles and quartiles;
 5. solve problems involving normal distributions;
 6. solve problems involving experimental, theoretical probability, the counting principle, permutations, combinations, conditional probability, and odds;
 7. solve problems involving measurement in both standard and nonstandard units; and
 8. solve geometry problems involving perimeter, area, surface area, volume, geometric modeling, symmetry, congruence, and similarity, using the Pythagorean Theorem as appropriate.
2. Planned Sequence of Topics and/or Learning Activities
1. Graphs and Functions
 - a. graph linear equations
 - b. function notation
 - c. vertical line test for functions
 - d. intercepts and slope in graphing linear equations
 - e. graph vertical and horizontal lines
 - f. graph quadratic functions
 2. Measurement
 - a. dimensional analysis
 - b. metric prefixes
 - c. measures of area and volume
 - d. measures of weight and temperature
 3. Geometry
 - a. points, lines, planes
 - b. geometric shapes and their properties

- c. perimeter and area
 - d. Pythagorean Theorem
 - e. surface area
 - f. volume
 - g. congruence, and similarity
4. Probability
- a. experimental probability
 - b. theoretical probability
 - c. methods of counting
 - d. permutations and combinations in probability
 - e. odds and events involving NOT and OR
5. Statistics
- a. sampling, frequency distributions, and graphs
 - b. measure of central tendency
 - c. measures of dispersion
 - d. the normal distribution and solving problems involving the normal distributions

3. Assessment Methods for Course Learning Goals

Students apply mathematical concepts and principles to identify and solve problems through informal assessment (oral communication among students and between teacher and students) and formal assessment (may include homework, quizzes, exams, projects, and comprehensive final).

A minimum of 70% of a student's grade must be determined from proctored assessments and work. These proctored assessments include tests, quizzes, departmental final exam, or other proctored in-class assignments.

The final exam must be at least 20% of the course grade. Study guides, formula sheets, and other aids may not be used on the final exam.

4. Reference, Resource, or Learning Materials to be used by Student:

A departmentally-selected textbook is used. Calculators are permitted to be used in the Statistics unit only. The permitted calculator is a TI 30X IIS. Details provided by the instructor of each course section. See course syllabus.

Introduction to Supply Chain Management (MKTG228): This new course has been approved.

I. Course Number and Title: MKTG228 Introduction to Supply Chain Management

II. Number of Credits: 3

III. Instructional Minutes" 2250

IV. Pre-req: MGMT100 or MGMT110

Co-req: MGMT100 or MGMT110

V. Other Pertinent Information: None

VI. Course Description

This course is an introduction to supply chain management (SCM) including the fundamental concepts and tools needed to create an effective and efficient supply chain which is critical to the success of a business. Topics include current key operational decisions, supply chain issues and strategies utilized.

VII. Required Course Content

A. Course Learning Goals

Student will:

- define key terms associated with supply chain management;
- explain why an effective supply chain is critical to the success of a business;
- describe the strategies employed to deal with global supply chains; and
- explain supply chain sustainability.

B. Sequence of Topics

- Foundations of SCM
- Decision making process in SCM
- Supply chain strategy and design
- Sustainability and lean management concepts
- Production distribution for SCM
- Common metrics to analyze supply chain performance
- Quality in SCM
- Inventory and production distribution for SCM
- Emerging trends and future directions

C. Assessment Methods

Course learning goals are assessed using a variety of tests, quizzes, and performance-based tasks.

D. Reference

See course syllabus.

[Preparatory Lessons \(MUSL100\)](#): The Master Course Outline, Section IV.
Prerequisites have changed to: "None."

[Secondary Lessons \(MUSL101\)](#): The Master Course Outline, Section IV.
Prerequisites have changed to: "None."

[Performance Class \(MUSL110\)](#): The Master Course Outline, Section IV.
Prerequisites have changed to: "None." Corequisites have changed to "None."

[Principal Lesson I \(MUSL111\)](#): The Master Course Outline has changed thus:

IV. Prerequisites: None

Corequisites: Music Majors must register concurrently for MUSL110 Performance Class.

V. Other Pertinent Information

Non-Music and Music majors: Students meet with an instructor for a weekly 50-minute lesson and a 50-minute Performance Class. There is a music lesson fee for this course.

Music majors: Acceptance into MUSL111 requires that students successfully perform and pass an audition before a Music faculty panel to demonstrate their competence in representative repertoire and technique that is commensurate with applied study at the prescribed collegiate level. Audition requirements vary by instrument and are published online by the Arts and Communication Department.

Students not meeting the minimum mastery level for entrance into the course will not be permitted to register for MUSL111. Instead, they will be required to register for MUSL100 Preparatory Lesson to attain the essential technical competence.

Students must successfully perform a mandatory jury exam before a Music faculty panel at the conclusion of the semester. The jury exam will serve as the sole determinant of whether a student is sufficiently qualified for admission into MUSL112 Primary Lesson II.

Failure to demonstrate the prescribed level of musical competence at the jury exam, as evidenced by either inadequate performance of the required material or nonattendance of the jury exam itself, will constitute summary failure of the course, and a student so affected will be denied registration in the succeeding course level. Under such circumstances to continue in the MUSL111-series course sequence, the student must register for MUSL100 Preparatory Lesson and subsequently pass the

associated jury examination. Satisfactory performance at this jury exam will qualify the student for registration in MUSL112 Private Lesson II.

Principal Lesson II (MUSL112): The Master Course Outline has changed thus:

IV. Prerequisites: None

Corequisites: Music Majors must register concurrently for MUSL110 Performance Class

V. Other Pertinent Information

Non-Music and Music majors: Students meet with an instructor for a weekly 50-minute lesson and a 50-minute Performance Class. There is a music lesson fee for this course.

Music majors: Acceptance into MUSL112 requires that students successfully perform and pass an audition before a Music faculty panel to demonstrate their competence in representative repertoire and technique that is commensurate with applied study at the prescribed collegiate level. Audition requirements vary by instrument and are published online by the Arts and Communication Department.

Students not meeting the minimum mastery level for entrance into the course will not be permitted to register for MUSL112. Instead, they will be required to register for MUSL100 Preparatory Lesson to attain the essential technical competence.

Students must successfully perform a mandatory jury exam before a Music faculty panel at the conclusion of the semester. The jury exam will serve as the sole determinant of whether a student is sufficiently qualified for admission into MUSL211 Primary Lesson II.

Failure to demonstrate the prescribed level of musical competence at the jury exam, as evidenced by either inadequate performance of the required material or nonattendance of the jury exam itself, will constitute summary failure of the course, and a student so affected will be denied registration in the succeeding course level. Under such circumstances to continue in the MUSL112-series course sequence, the student must register for MUSL100 Preparatory Lesson and subsequently pass the associated jury examination. Satisfactory performance at this jury exam will qualify the student for registration in MUSL211 Primary Lesson III.

Principal Lesson III (MUSL211): The Master Course Outline has changed thus:

IV. Prerequisites: None

Corequisites: Music Majors must register concurrently for MUSL110 Performance Class

V. Other Pertinent Information

Non-Music and Music majors: Students meet with an instructor for a weekly 50-minute lesson and a 50-minute Performance Class. There is a music lesson fee for this course.

Music majors: Acceptance into MUSL211 requires that students successfully perform and pass an audition before a Music faculty panel to demonstrate their competence in

representative repertoire and technique that is commensurate with applied study at the prescribed collegiate level. Audition requirements vary by instrument and are published online by the Arts and Communication Department.

Students not meeting the minimum mastery level for entrance into the course will not be permitted to register for MUSL211. Instead, they will be required to register for MUSL100 Preparatory Lesson to attain the essential technical competence.

Students must successfully perform a mandatory jury exam before a Music faculty panel at the conclusion of the semester. The jury exam will serve as the sole determinant of whether a student is sufficiently qualified for admission into MUSL212 Primary Lesson IV.

Failure to demonstrate the prescribed level of musical competence at the jury exam, as evidenced by either inadequate performance of the required material or nonattendance of the jury exam itself, will constitute summary failure of the course, and a student so affected will be denied registration in the succeeding course level. Under such circumstances to continue in the MUSL112-series course sequence, the student must register for MUSL100 Preparatory Lesson and subsequently pass the associated jury examination. Satisfactory performance at this jury exam will qualify the student for registration in MUSL211 Primary Lesson III.

[Principal Lesson IV \(MUSL212\)](#): The Master Course Outline has changed thus:

IV. Prerequisites: None

Corequisites: Music Majors must register concurrently for MUSL110 Performance Class

V. Other Pertinent Information

Non-Music and Music majors: Students meet with an instructor for a weekly 50-minute lesson and a 50-minute Performance Class. There is a music lesson fee for this course.

Music majors: Successful completion of MUSL212 requires that students successfully perform and pass an audition examination before a Music faculty panel to demonstrate their competence in representative repertoire and technique that is commensurate with applied study at the prescribed collegiate level. Audition requirements vary by instrument and are published online by the Arts and Communication Department.

Students must successfully perform and pass a mandatory jury exam before a Music faculty panel at the conclusion of the semester.

Failure to demonstrate the prescribed level of musical competence at the jury exam, as evidenced by either inadequate performance of the required material or nonattendance of the jury exam itself, will constitute summary failure of the course, and a student so affected will be denied registration in the succeeding course level. Under such circumstances to continue in the MUSL111-series course sequence, the student must register for MUSL100 Preparatory Lesson and subsequently pass the associated jury examination.

[Emergency Management Exercise Design \(PUBS207\)](#): The Master Course Outline, Section V. Other Pertinent Information has been updated to:

1. This course may be completed through Prior Learning Assessment (PLA) if the student has completed either option A or B:
 - i. Option A: Master Exercise Practitioner Program (MEPP) through the Federal Emergency Management Agency's Emergency Management Institute.
 - ii. Option B: IS-100 Introduction to Incident Command System "ICS-100" (FEMA), IS-120 An Introduction to Exercises (FEMA), IS-130 How to be an Exercise Evaluator (FEMA), IS-200 Basic Incident Command System for Initial Response "ICS-200" (FEMA), IS-230 Fundamentals of Emergency Management (FEMA), IS-235 Emergency Planning (FEMA), IS-700 An Introduction to the National Incident Management System (FEMA), IS-800 An Introduction to the National Response Framework (FEMA), IS-2200 Basic Emergency Operations Center Functions (FEMA), and E/L/K0146 Homeland Security Exercise and Evaluation Program Training (FEMA).