Course Description
IN 105. Information Technology (IT) Concepts. 3 hours credit. This course will enable the student to explain the core concepts of information technology tools and services. The student will demonstrate competence in evaluating Web resources, using application and system software, assessing hardware, describing networking between devices, protecting digital data, and managing a digital lifestyle. The student will explore concepts related to software programming, managing databases, and establishing secure networks. The student will also discuss the history of information technology and evaluate ethical issues related to information technology.

Required Materials
For complete material(s) information, refer to https://bookstore.butlercc.edu

Butler-assessed Outcomes
The intention is for the student to be able to:
1. Articulate the history, technical concepts, and ethical issues related to information technology.
2. Demonstrate the ability to use the tools and services related to information technology.

Learning PACT Skills that will be developed and documented in this course
Through involvement in this course, the student will develop ability in the following PACT skill area(s):
Technology skills
- Discipline-specific technology – Through the development of projects and completion of dynamic learning modules, the student will demonstrate skills in the field of information technology.

Major Summative Assessment Task(s)
These learning outcomes and the Learning PACT skills will be demonstrated by:
1. Completing help desk scenarios that require the ability to communicate conceptual understanding and practical knowledge in response to typical real-world questions about information technology.

Skills or Competencies
Actions that are essential to achieve the course outcomes:
1. Describe the impact of information technology
2. Describe computer components and functions
3. Articulate the development and current state of the Internet
4. Describe and use application software
5. Describe and maintain system software
6. Evaluate and deploy hardware
7. Manage digital lifestyle devices
8. Secure digital systems
9. Articulate concepts related to software programming
10. Articulate concepts related to database management
11. Describe concepts related to network security
12. Describe a model of how the Internet works

Learning Units
I. Impact of information technology
   A. Technology at home
   B. Technology and careers
   C. Technology in society
   D. Technology on the world stage

II. Computer components and functions
    A. Input/output
    B. Systems
    C. Bits and bytes
    D. Processing
    E. Memory and storage
    F. Ports

III. Internet history
     A. History of the Internet
     B. Communication and collaboration
     C. E-commerce
     D. Entertainment
     E. Knowledge and search engines

IV. Application software
    A. Productivity and business software
    B. Multimedia and entertainment software
    C. Software management

V. System software
    A. Operating systems
    B. File management
    C. Utility programs

VI. Hardware
    A. CPU, memory, and storage
    B. Video and audio hardware
    C. System reliability
    D. Network and connect devices

IN 105 Information Technology (IT) Concepts
E. Network architecture
F. Hardware for networks
G. Ethernet and wireless networks
H. Network security

VII. Networks
   A. Smartphones
   B. Tablets
   C. Ultrabooks

VIII. Security
   A. Digital data protection
   B. Digital device protection

IX. Programming
   A. Information systems
   B. Programming languages
   C. Project development

X. Databases
   A. Types
   B. Design
   C. Data mining

XI. Network threats
   A. Servers and topologies
   B. Transmission media
   C. Network operating systems
   D. Network threats and security

XII. Internet protocols and tools
   A. Protocols
   B. IP addresses and domain names
   C. HTML, CSS, and other web building blocks

Learning Activities
Learning activities will be assigned to assist the student to achieve the intended learning outcome(s) through lecture, instructor-led class discussion, guest speakers, group activities, drills/skill practice, and other activities at the discretion of the instructor.

Grade Determination
The student will be graded on learning activities and assessment tasks. Grade determinants may include the following: daily work, quizzes, chapter or unit tests, comprehensive examinations, projects, presentations, class participation, and other methods of evaluation at the discretion of the instructor.