# St. Petersburg College

# SPC

# APPROVED COURSE OUTLINE

**Credit(s) 2.00**
**Contact Hours 47.00**
**Effective Term: Fall 2015 (505)**

**CET 1175C**

**Technical Support Fundamentals**
**Engineering and Building Arts Department**

Requisites:
   Prerequisite: CGS 1070 Or demonstration of basic computer literacy with a minimum grade of C

Course Description:
   This course teaches computer applications for technical support staff in a health care setting. Students become familiar with databases, spreadsheets, technical drawings, and project organization as they apply to various technical projects relative to the clinical engineering department. Students will also explore specific databases used in the documentation of medical device technology management. Includes needs analysis, process documentation troubleshooting computer problems, customer service fundamentals and training end users. 47 contact hours

Course Topics:

   - None

Learning Outcomes and Objectives:
**1. Students will demonstrate competency by performing basic word processing tasks, demonstrating research skills utilizing online resources and presenting data and information in an appropriate manner by:**
   a. applying appropriate communication methods (e.g. presentations, formal reports, memos, e-mail, etc.)
   b. recognizing inefficiencies in required processes and take appropriate action.
   c. recognizing data entry errors in technical documents and making appropriate changes.
   d. performing basic word processing tasks.
   e. communicating and following specified policies.

**2. Students will identify features and demonstrate use of computer applications for technical support staff in a health care setting by:**
   a. Using and configuring the Windows Operating System for use in a health care setting.
   b. Identifying resources and documentation needed to install, configure, upgrade and troubleshoot Operating Systems.
   c. researching company communication policies and identifying compliance issues for reports and data.
   d. identifying MS Office applications and resources needed in a health care setting.
   e. using MS Office applications to organize and produce documentation that includes Word Processing, Spreadsheets and Databases needed in a health care setting.

**3. Students will identify and use of specific databases needed for the documentation of medical device technology management by:**
   a. Identify and researching the use of databases related to medical device technology management.
   b. using MS Excel to create worksheets, ender data, utilize formulas and produce charts.
   c. utilizing statistical tools to analyze a set of data in a given scenario related to medical device management.
   d. using a vector drawing program or CAD application to produce accurate documentation and diagrams for use with medical device management.

**4. Students will demonstrate skills needed to search, organizing and enter information into databases by:** a. identifying databases and their use by Biomedical Equipment Technicians (BMETs) in a clinical setting to track tasks needed for the management of medical devices.
   b. Identifying and using database applications to document medical devices and tasks needed for their use in a clinical setting.

**5. Students identify methods of data collection and performing basic data analysis for research, development, or manufacturing of biomedical application by:**
  a. research, identify and describe methods of medical device data collection in a health care or manufacturing setting.
  b. identifying and discussing vendors for applications used to collect information and manage tasks related to medical devices in a health care or manufacturing setting.
  c. identifying and creating data sets for analysis of volume or frequency of activities related to medical devices in a health care or manufacturing setting.

**6. Students will identify and demonstrate ability to use internet resources related to biomedical information systems by:**
  a. researching, identifying and documenting internet resources for the use of biomedical information systems needed to evaluate, test, use and maintain biomedical equipment.
  b. locating and documenting internet resources for local, state and federal guidance and regulator documents needed to evaluate, test, use and maintain biomedical equipment
  c. Research, document, and communicate internet current resources from federal regulatory sources for medical equipment and related problems or notifications.

**7. Students will identify document templates and use features of word processing applications for technical report writing.**
  a. identifying documentation, resources and templates used to create technical reports.
  b. identifying and using requirements needed for formatting procedural documents, standard operating procedures (SOPs) and/or technical reports.
  c. Analyzing, planning and writing technical reports for use in the management of medical devices in a clinical or manufacturing setting.

**8. Students will research and perform needs analysis and complete process documentation.**
  a. researching and identifying best practices for medical device needs analysis.
  b. analyzing, planning and drafting needs analysis for use in the management of medical devices in a clinical or manufacturing setting,
  c. analyzing, planning and drafting processes, instructions and related documentation for use with medical devices in a clinical or manufacturing setting.

**9. Students will demonstrate ability to recognize and effectively use customer service fundamentals needed for a hospital environment.**
  a. researching and identifying best practices for use of effective customer service skills by technical staff in a hospital environment.
  b. demonstrating the use of customer service skills best practices commonly needed by technical staff in a hospital environment.
  c. identifying and applying techniques needed for dealing with difficult situations or angry individuals.

Criteria Performance Standard:
Student must achieve a grade of a "C" or better.

Representative Textbooks:

- Textbook(s):

  1. **Recommended** - Atles, Leslie. *A Practicum for Biomedical Engineering & Technology Management Issues*, ed. Kendall-Harris, 2008

- Software:

  1. **Recommended** - AIMS. Phoenix Data Systems, Inc., Most Recent ed.

Relevant Dates:
  C&I Approval: , BOT Approval: , Effective Term: Fall 2015 (505)

History of Changes:

  C&I Approval: , BOT Approval: , Effective Term: Fall 2015 (505)

Related Programs:

  1. Engineering Technology Associate in Science (ENG-AS) (505) (Active)
  2. Engineering Technology Associate in Science (ENG-AS) (520) (Pending)