STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK

MASTER SYLLABUS

CITA 342 - VISUAL PROGRAMMING AND DEVELOPMENT TOOLS

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CANINO SCHOOL OF ENGINEERING TECHNOLOGY
DECISION SYSTEMS
FALL 2018

A. **TITLE**: Visual Programming and Development Tools

B. **COURSE NUMBER:** CITA 342

C. **CREDIT HOURS: (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)**

 # Credit Hours: 3
 # Lecture Hours: 2 **per week**
 # Lab Hours: 2 **per week**
Other: **per week**

Course Length: 15 **Weeks**

D. **WRITING INTENSIVE COURSE**: No

E. **GER CATEGORY:** None

F. **SEMESTER(S) OFFERED:** Fall

G. **COURSE DESCRIPTION:** An introduction to the development of computer applications using rapid development tools such as Visual Basic or Visual C++. Emphasis is on designing and managing graphical user interfaces, procedures, file management, debugging and testing.

H. **PRE-REQUISITES/CO-REQUISITES:**

a. Pre-requisite(s): CITA 180 Introduction to Programming or GMMD 121 Programming for Visual Arts and Design
b. Co-requisite(s): none
c. Pre- or co-requisite(s): none

I. **STUDENT LEARNING OUTCOMES:**

By the end of this course, the student will be able to:

Course Student Learning Outcome [SLO]	***PSLO***	***ISLO***
a. Set up Microsoft Foundation Classes (MFC) applications from the ground up	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
b. Develop MFC applications by working with menus, toolbars, dialogs, and other controls	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
c. Develop MFC applications by working with documents and views	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
d. Develop MFC applications by working with data sources	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
e. Compose variable and class names following MFC naming conventions	3. Demonstrate a solid understanding of the methodologies and foundations of IT	5
f. Design user-friendly graphical interface	1. Communicate effectively both verbally and in writing	1[W] 5

	3. Demonstrate a solid understanding of the methodologies and foundations of IT	

J. **APPLIED LEARNING COMPONENT:** **Yes** X **No**

- Classroom/Lab

K. **TEXTS:** None

L. **REFERENCES:** Various online resource such as SUNY Canton Library Books24x7 ITPro Book Database

M. **EQUIPMENT:** Computer lab classroom

N. **GRADING METHOD:** A-F

O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**

- Exams
- Quizzes
- Participation

P. **DETAILED COURSE OUTLINE:**

I. Windows Programming with the Microsoft Foundation Classes
- A. MFC Notation
- B. How an MFC Program Is Structured
- C. The Document/View Concept in MFC
- D. Creating MFC Applications
- E. Communicating with Windows
- F. Working with Menus and Toolbars

II. Drawing in a Window !

A. The Drawing Mechanism in Visual C++
B. Drawing Graphics in Practice
C. Programming the Mouse

III. Advanced MFC Techniques
A. Creating the Document and Improving the View
B. Storing and Printing Documents
C. Working with Dialogs and Controls
D. Connecting to Data Sources
E. Updating Data Sources

Q. LABORATORY OUTLINE:

I. Create MFC applications

II. Develop MFC applications by working with menus and toolbars

III. Develop MFC applications by working with documents and views

IV. Develop MFC applications by working with device contexts

V. Develop MFC applications by working with dialogs and other controls

VI. Develop MFC applications by working with data sources