Agenda Item #15-43
Effective Fall 2015
Effective Fall 2016, with revisions

Eastern Illinois University
New Course Proposal
MIS 4420, Advanced VB.NET Business Programming

Banner/Catalog Information (Coversheet)

1. __X_**New Course or ____Revision of Existing Course**

2. **Course prefix and number:** MIS 4420

3. **Short title:** Advanced VB Programming

4. **Long title:** Advanced VB.NET Business Programming

5. **Hours per week:** _3__ Class _0__ Lab _3__ Credit

6. **Terms:** __ Fall __ Spring ___ Summer _X__ On demand

7. **Initial term**: ___ Fall _X_ Spring ___ Summer Year: _2016__

8. **Catalog course description:** A study of advanced features and topics in a procedural programming language using Visual Basic .NET concepts and commands. Content includes object-oriented concepts and design, configuring Visual Basic, user interfaces, .NET Framework controls, add-ins utilities, dynamic control and object creation, creating a multiple documents interface application (MDI), using the Windows API, Web Services, adding an Online Help system to applications, and deployment of applications.

9. **Course attributes:**

   General education component: _N/A

   ___ Cultural diversity ___ Honors ___ Writing centered ___ Writing intensive ___Writing active

10. **Instructional delivery**
    Type of Course:

    _X_ Lecture ___ Lab __ Lecture/lab combined ___ Independent study/research

    ___ Internship ___ Performance ___ Practicum/clinical ___ Other, specify: _____

    Mode(s) of Delivery:

    _X_ Face to Face _X__ Online ___ Study Abroad

    _X_ Hybrid, specify approximate amount of on-line and face-to-face instruction: A maximum of 49% of the course will be online.

11. Course(s) to be deleted from the catalog once this course is approved. _None

12. **Equivalent course(s):** _None

    a. **Are students allowed to take equivalent course(s) for credit?** ___ Yes _X_ No

13. **Prerequisite(s):** Junior standing, MIS 2000 with C or better, or permission of the Associate Chair, School of Business.

    a. **Can prerequisite be taken concurrently?** _X_ Yes ___ No

    b. **Minimum grade required for the prerequisite course(s)?** _C_

    c. **Use Banner coding to enforce prerequisite course(s)?** ___ Yes _X_ No

    d. **Who may waive prerequisite(s)?**

    ___ No one ___ Chair ___ Instructor ___ Advisor _X_ Other (specify): Associate Chair

14. **Co-requisite(s):** _None_____

15. **Enrollment restrictions**

    a. **Degrees, colleges, majors, levels, classes which <u>may</u> take the course:** Juniors and Seniors_

    b. **Degrees, colleges, majors, levels, classes which may <u>not</u> take the course:** Freshman and Sophomores

16. **Repeat status:** _X_ May not be repeated ___ May be repeated once with credit

17. **Enter the limit, if any, on hours which may be applied to a major or minor:** _3_

18. **Grading methods:** _X_ Standard ___ CR/NC __ Audit ___ ABC/NC

19. **Special grading provisions:**

    ___ Grade for course will <u>not</u> count in a student's grade point average.

    ___ Grade for course will <u>not</u> count in hours toward graduation.

    ___ Grade for course will be removed from GPA if student already has credit for or is registered in: _____

    ___ Credit hours for course will be removed from student's hours toward graduation if student already has credit for or is registered in: _____

20. **Additional costs to students:**
    Supplemental Materials or Software: None_____

    Course Fee _X_No ___Yes, Explain if yes_____

21. **Community college transfer:**

    ___ A community college course may be judged equivalent.

    _X_ A community college may <u>not</u> be judged equivalent.

    Note: Upper division credit (3000+) will <u>not</u> be granted for a community college course, even if the content is judged to be equivalent.

Rationale, Justifications, and Assurances (Part I)

1. ___Course is required for the major(s) of _____

   ___Course is required for the minor(s) of _____

   ___Course is required for the certificate program(s) of _____

   _X_Course is used as an elective for the Management Information Systems major and minor

2. **Rationale for proposal**:

   This course has been created to enhance students' business programming skills and prepare them for entry-level positions as Computer Programmers, Computer Systems Analysts, and Software Developers among others. The course is also designed to enhance interdisciplinary learning between various functional areas of business, namely management, marketing, operations management and finance. According to the Bureau of Labor statistics report of 2012, the job outlook for Computer Programmers, Computer Systems Analysts, and Software Developers is expected to grow from 2012 to 2022 by 8% (Computer Programmers), 22% (Software Developers), and 25% (Computer Systems Analysts). The median pay as of now is $74,280 for Computer Programmers, $79,680 for Computer Systems Analysts, and $93,350 for Software Developers and a bachelor's degree is required. Many employers are seeking to integrate .NET components into their existing legacy systems. Thus, this course is designed to prepare students for evolving industry demand in the growing field of MIS related areas. This course is considered a relevant elective and is designed to enhance the value of the business curriculum. It will be one of the cornerstone courses in future minor and major offerings in MIS/OM.

3. **Justifications for (answer N/A if not applicable)**

   Similarity to other courses: N/A

   Prerequisites: This course is an advanced course in MIS/OM. Because knowledge of Visual Basic programming language is needed, students must complete the prerequisite MIS 2000 Introduction to Business Logic and Programming Skills.

   Co-requisites: N/A

   Enrollment restrictions: As an advanced course in the MIS major and minor, sequencing of courses is necessary in skill building of related MIS skills and allows the students to be technologically closer to practice and job-related requirements at their time of graduation.

   Writing active, intensive, centered: N/A

4. **General education assurances (answer N/A if not applicable)**

   General education component: N/A

   Curriculum: N/A

   Instruction: N/A

   Assessment: N/A

5. **Online/Hybrid delivery justification & assurances (answer N/A if not applicable)**

   Online or hybrid delivery justification: EIU School of Business continues to deliver high quality education through traditional methods of teaching and technologically advanced

methods such as online and hybrid education. Students are able to watch recorded videos whenever they prefer, stop the video, take notes and ask questions of the instructor and their peers. Advanced VB.Net Business Programming content is suitable for online or hybrid education.

Instruction: Lectures from the face-to-face courses may be recorded and posted online for students to view. Other online components (e.g., tutorials, videos, discussions) will be included. All faculty who will deliver this course online are/will be OCDI (or appropriate equivalent) trained.

Integrity: Students will take exams through an online test taking monitoring system, or they will take them supervised at a community college in their area.

Interaction: At the discretion of the faculty, provisions and requirements would vary but generally will utilize Email, Web-Based Discussions, and Web-conferencing.

Model Syllabus (Part II)

Please include the following information:

1. Course number and title
MIS 4420 Advanced VB.Net Business Programming

2. Catalog description

A study of advanced features and topics in a procedural programming language using Visual Basic .NET concepts and commands. Content includes object-oriented concepts and design, configuring Visual Basic, user interfaces, .NET Framework controls, add-ins utilities, dynamic control and object creation, creating a multiple documents interface application (MDI), using the Windows API, Registry and INI files, Web Services, adding an Online Help system to applications, and deployment of applications.

3. Learning objectives.
Upon successful completion of this course, students will be able to:

1. Apply divide-and-conquer technique to demonstrate analysis and design of large-scaled business applications; (CT1)
2. Create formal programming documentation; (WR1, WR3-4)
3. Interpret and apply graphical user interfaces (GUI) usability standards;
4. Apply GUI usability standards in windows-based business applications;
5. Design and develop a web-based business application; (CT1-2)
6. Design and develop an application with databases;
7. Identify security issues with database and web development;
8. Design and plan an application deployment;

4. Course materials.
Advanced Visual Basic 2010, 5/e, Irvine & Gaddis, Addison-Wesley, 2012.

5. Weekly outline of content.

Week	Class Content	Coverage
1	Introduction to course. Review of Visual Basic .NET fundamentals.	Two 75-minute class period equivalents
2	Menus, sub procedures, functions, multiple document interfaces applications	Two 75-minute class period equivalents
3	Numeric and string functions	Two 75-minute class period equivalents
4	Class and objects	Two 75-minute class period equivalents
5	Collections	Two 75-minute class period equivalents
6	GUI design with usability standards	Two 75-minute class period equivalents
7	Interacting with other windows applications	Two 75-minute class period equivalents
8	Database application	Two 75-minute class period equivalents
9	Advanced classes	Two 75-minute class period equivalents
10	Creating web applications	Two 75-minute class period equivalents
11	Web applications with databases	Two 75-minute class period equivalents
12	Using the Windows API, Registry and INI files	Two 75-minute class period equivalents
13	Exception handling	Two 75-minute class period equivalents
14	Deployment of applications	Two 75-minute class period equivalents
15	Other Topics	Two 75-minute class period equivalents
16	Final Exam	Two Hours
	Total	Thirty 75-minute class period equivalents (37.5 hrs) + Two-hour final exam

6. Assignments and evaluation, including weights for final course grade.
The grade components and weights may vary by the instructor, but are generally considered as follows:

Examinations and quizzes: 20%
Weekly lab exercises for topics covered: 10%
Homework (web and database application design): 20%
Project (application plan/building/packaging for deployment): 30%
Final Examination: 20%
Total: 100%

7. Grading scale.

90% or better	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	F

8. Correlation of learning objectives to assignments and evaluation.

Objective	Midterm and Quizzes	Projects, lab exercises, homework	Final
1	X	X	
2	X	X	X
3	X	X	X
4	X	X	X
5	X	X	X
6	X	X	X
7	X	X	X
8		X	X

Date approved by the discipline: Approved by MIS/OM Discipline on November 4, 2014
Date approved by the department or school: 12/3/14
Date approved by the college curriculum committee: 1/21/15
Date approved by the Honors Council *(if this is an honors course):*
Date approved by CAA: 2/19/15 **CGS:** Not applicable.