American Public University System

The Ultimate Advantage is an Educated Mind

Department of Information Technology
ENTD465: Application Development for Windows Mobile Operating Systems
Credit Hours: 3
Length of Course: 8 Weeks
Prerequisite(s): None
Software Required:
Visual Studio 2012 Express for Windows Phones (free)

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Instructor Information

Instructor:
Email:

Course Description (Catalog)

This course is a study of Microsoft application development for mobile/embedded devices. The course expands on concepts introduced in the mobile application design and development course and expands into more advanced topics regarding application development using Microsoft’s software. The course will cover scenario based exercises and requires students to use assigned tools to write, test and deploy mobile software applications. The course allows the students to experience maximum amount of application and retention of material covered in the course.

Course Scope

This course is divided into 8 weeks and is organized to give students an introduction to developing applications on Microsoft mobile/embedded devices. The course includes textbook readings, exercises,
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graded forums (some that are based on completed assignments from the book lessons), 2 quizzes, a midterm project and final project.

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Course Objectives

After completing this course, the student will be able to:

- Develop applications for Microsoft mobile/embedded devices.
- Understand the differences languages to create mobile applications on Microsoft technology
- Develop simple games using Microsoft mobile/embedded devices.
- Analyze different components (UI, coding, formatting) of mobile applications.

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Course Delivery Method

This course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Course materials and access to an online learning management system will be made available to each student. Online assignments are due by the last day of each week (Sunday night) and include forum discussion interaction that provokes student interaction (accomplished in groups through a threaded forums), quizzes (graded electronically) and individual assignments (submitted for review by the Instructor). Your Instructor will support you throughout this eight-week course.

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Course Materials


This book is free in the APUS library.

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Evaluation Procedures

Students are expected to maintain routine contact with the instructor throughout the course. While the number of contacts may vary according to the specific course and individual student need, the University requires periodic weekly contacts during the semester. Contact will consist of professor notes, forum interaction, and email feedback. The method of discussion will be on-line related to issues concerning forum assignments, quizzes, assignments, the midterm and final.

TEXTBOOK READINGS

The main book for the course, Windows Phone 7 Application Development: 24 Hour Trainer, will be used for textbook readings. Review the table at the end of the syllabus to see assigned readings for each week.
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PROJECTS
The projects for this course are located throughout each Lesson in the main course book. The projects that are required for grading with this course are created from scratch.

FORUM
The Forum assignments for this course are designed to promote interactivity among students and enhance the online learning process. The Forum provides maximum flexibility because you do not have to be online at the same time as another person and you can read what other students have written.

Forum Timing: For the forum, you must post your work by midnight on Wednesday, continue to follow your classmates' posts for the remainder of the week, and post the follow-up peer responses prior to midnight on Sunday, except for week one. Your follow-up posts can add additional insight to a classmate's opinions or can challenge their opinions. Use examples from the readings, or from your own research, to support your views, as appropriate. Be sure to read the follow-up posts to your own posts and reply to any questions or requests for clarification. You are encouraged to conduct research and use other sources to support your answers.

Required Participation: Please keep in mind that the forum assignments require you to make at least 1 post to the forum with at least 300 words about the topic and also respond to at least 2 peers' posts with at least 150 words. Please be advised that there will be point deductions if you do not comply with these requirements of the assignment. Each one of you will have a different and unique experience that we can all learn from. Your participation in the Forums unleashes the power of synergy in our classroom. To facilitate this interaction, please be prompt when posting your forum work for each week; this provides time for the others to actively engage in the dialogue. For practical reasons, when you respond to other learners' posts, please start your response by referencing their name. I will read and grade your participation by reading the forum. There is no need to also post your forum work in the assignments area of the classroom. Refer to the forum matrix at the end of the syllabus for more details on grading.

QUIZZES
There will be 2 open book quizzes to be taken after the readings are completed. Each quiz is posted in the electronic classroom under the Tests & Quizzes section.

MIDTERM
The Midterm Project requires you to use your knowledge of Window Mobile systems to create a small application.

FINAL ASSIGNMENT/PROJECT
The Final Project requires you to use your knowledge of Window Mobile systems to create a small application.

GRADING: Please see the student handbook to reference the University's grading scale. My typical grading schedule is to look at your assignments throughout the week after they are due. If time allows, I will grade ahead for those of you who have worked ahead but it is my policy to grade your assignments with the rest of the class as they become due.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Forums</td>
<td>100 points</td>
</tr>
<tr>
<td></td>
<td>(20%)</td>
</tr>
<tr>
<td>6 Assignments</td>
<td>100 points each</td>
</tr>
<tr>
<td></td>
<td>(20%)</td>
</tr>
<tr>
<td>2 Quizzes</td>
<td>100 points each</td>
</tr>
<tr>
<td></td>
<td>(20%)</td>
</tr>
<tr>
<td>Midterm Project</td>
<td>100 points</td>
</tr>
<tr>
<td></td>
<td>(20%)</td>
</tr>
</tbody>
</table>
## Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Learning Objectives</th>
<th>Readings</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 1    | Getting start with Windows 7 Phone and creating simple applications | - Install Microsoft Visual Studio Express Mobile Edition  
      - Understand the basic features of Microsoft Visual Studio Express Mobile Edition  
      - Create a basic Hello World applications  
      - Understanding the basic functions of Windows 7 operating system | **Textbook:**  
     Read Chapters 1, 2 and 3 | **Forum 1**  
     Introduction and any comments about getting started  
     **Assignment 1** |
| 2    | Creating and test projects                           | - Create a new project  
      - Compile and build a project  
      - Run and test a project  
      - Understand the basics of XAML | **Textbook:**  
     Read Chapters 4, 5 and 6 | **Forum 2**  
     Project Basics  
     **Assignment 2** |
| 3    | Phone Navigation  
      UI Components  
      Screen Overlays | - Understand how Windows Phone navigate  
      - Determine the types of UI components  
      - Understand the different UI controls.  
      - Understand screen layouts  
      - Understand screen overlays | **Textbook:**  
     Read Chapters 7, 8 and 9 | **Forum 3**  
     Screens and Navigation  
     **Assignment 3** |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Study Material</th>
<th>Discussions/Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Multi-Touch</td>
<td>- How multi-touch works</td>
<td>Forum 4</td>
</tr>
<tr>
<td></td>
<td>Transforms</td>
<td>- Understand Transforms</td>
<td>User Interface</td>
</tr>
<tr>
<td></td>
<td>Animation</td>
<td>- Understand how animation is done</td>
<td>Assignment 4</td>
</tr>
<tr>
<td></td>
<td>User Settings</td>
<td>- User settings</td>
<td>Quiz 1 (chapters 1 – 12)</td>
</tr>
<tr>
<td>5</td>
<td>Screen rotation</td>
<td>- Understand how screens can rotate and how that affects an application</td>
<td>No Forum</td>
</tr>
<tr>
<td></td>
<td>Screen sizing</td>
<td>- Understand how screens can be resized and how that affects an application</td>
<td>Midterm Project</td>
</tr>
<tr>
<td></td>
<td>Tasks</td>
<td>- Understand Windows Tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enabling</td>
<td>- Understand basic networking</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>WebBrowser Control</td>
<td>- Use WebBrowser Controls</td>
<td>Forum 5</td>
</tr>
<tr>
<td></td>
<td>Isolated Storage</td>
<td>- Understand and implement isolated storage</td>
<td>User Experience, Networking and Data</td>
</tr>
<tr>
<td></td>
<td>Working with data</td>
<td>- Understand how to work with data</td>
<td>Assignment 5</td>
</tr>
<tr>
<td>7</td>
<td>Music</td>
<td>- Understand how to play music</td>
<td>Forum 6</td>
</tr>
<tr>
<td></td>
<td>Video</td>
<td>- Understand how to show video</td>
<td>Multimedia, Accelerometer and GPS</td>
</tr>
<tr>
<td></td>
<td>Accelerometer</td>
<td>- Understand the Accelerometer</td>
<td>Assignment 6</td>
</tr>
<tr>
<td></td>
<td>GPS</td>
<td>- Understand how to use GPS</td>
<td>Quiz 2 (chapters 13 – 21)</td>
</tr>
<tr>
<td>8</td>
<td>Localization</td>
<td>- Changing languages with Localization</td>
<td>No Forum</td>
</tr>
<tr>
<td></td>
<td>Packaging and Deployment</td>
<td>- Packaging Window Mobile applications</td>
<td>Final Assignment/Project</td>
</tr>
<tr>
<td></td>
<td>Generate Ad</td>
<td>- Deploying Window Mobile applications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Revenue</td>
<td>- Putting Ads on the screen</td>
<td></td>
</tr>
</tbody>
</table>

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Policies

Please see the student handbook to reference all University policies. Quick links to frequently asked question about policies are listed below.

- Drop/Withdrawal Policy
- Plagiarism Policy
- Extension Process and Policy

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Academic Services

ONLINE LIBRARY RESEARCH CENTER & LEARNING RESOURCES
The Online Library Research Center is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Center provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to orc@apus.edu.

- Charles Town Library and Inter Library Loan: The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- Electronic Books: You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- Electronic Journals: The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.
- Turnitin.com: Turnitin.com is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.
- Smarthinking: Students have access to 10 free hours of tutoring service per year through Smarthinking. Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is
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located in the Online Research Center. From the ORC home page, click on either the “Writing Center” or “Tutoring Center” and then click “Smarthinking.” All login information is available.

Selected Bibliography

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Uploading Assignments

All assignments should be directly linked to the Assignment Area of the classroom. The best way to upload a file is to attach it to each assignment by following these steps:

- First click on Assignments in the classroom.
- Then click on the individual assignment name that you are working on.
- Then under Optional File Upload, Click Browse.
- This will allow you to look for the file that you saved on your computer.
- Choose the file and it will upload it under this assignment for me to see.
- You may upload more than one file in this area by simply choosing two or more documents while browsing your computer.

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<table>
<thead>
<tr>
<th>Synthesis of concepts</th>
<th>Applications of personal experience</th>
<th>Clear citations</th>
<th>Writing standards</th>
<th>Synthesis of concepts</th>
<th>Timeliness</th>
</tr>
</thead>
<tbody>
<tr>
<td>The response refers to course materials and shows a clear understanding of main ideas and concepts. There are no irrelevant comments and the information is on point. Ideas are clearly and properly organized (300 words or more).</td>
<td>The response provides personal examples that tie in with the course material discussed. Reflection is evident and clearly ties in with the material presented. Insight was provided to some concept.</td>
<td>The response made proper reference to the course text or to other materials that were referenced or referred to in the discussion. Opinions were also included and were valid.</td>
<td>The writing is grammatically correct, clear and concise. The response is well formulated and easy to read and understand. Correct terminology was used when needed.</td>
<td>The other learner’s ideas, questions, concerns were addressed. The response referenced reading or lecture materials when needed. The response addressed the learner’s feelings if needed. There were no irrelevant or off-point comments. The posting reflects a clear understanding of the other learner’s ideas (150 words or more).</td>
<td>The posting submitted on time.</td>
</tr>
</tbody>
</table>

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