INFORMATION TECHNOLOGY COLLEGE COURSE OF STUDY

SDO1 – SOFTWARE DEVELOPMENT

DESCRIPTION: This document outlines the sequence of learning activities students should complete to prepare to demonstrate competence in this subject area. The timeline represents the standard number of weeks that one should allow to prepare for this assessment. These steps may be completed more quickly than shown below as determined in consultation with your mentor.

This assessment could take you up to 6 months to prepare. Please discuss this possibility with your mentor so you can plan accordingly!

The starting point for the preparation for any course is to review the competencies in the domain area. There are two ways by which you can review the competencies. One is through the AAP on the portal. Click on the SDO1, and then the Competencies tab. This tab will list all the competencies for the course.

The SDO1 requires the student learn the content and achieve a passing score on the Software Development objective exam. The Software Development objective exam includes a random selection of 49 items that must be completed within 150 minutes. To achieve a passing score on the exam, candidates must correctly answer at least 32 of the 49 scored questions to achieve a total score of 65% or greater. Once you have submitted your passing score, you will receive a PASS on your AAP for the Software Development assessment.

As with any learning activity, steps may be completed more quickly than noted below, or they could take the full amount of time indicated. We provide the pacing (Week One, Week Two, etc.) as a guide to amount of time you should take to develop the competencies necessary and prepare to complete the required assessment on time. Completing your assessments within the required timeline keeps you on pace for Satisfactory Academic Progress and Graduation.

LEARNING RESOURCES (see listing on the resources tab of your AAP to enroll or order):

SKILLSOFT:
This resource is in the form of online-self-paced instruction. You should automatically be enrolled in this resource when you’ve successfully completed EWB. If for some reason, you never received your login credentials, please e-mail our Learning Resources department: learning@wgu.edu.

**LEARNKEY:**

This resource will be used in conjunction with Skillsoft. This resource is in the form of online-self-paced instruction. You can enroll in this learning resource through the learning resources tab on your AAP.

**SUN LEARNING CONNECTION:**

This resource will be used in conjunction with the textbook and Learnkey materials. The Sun Connection Learning classes are available to only WGU, degree-seeking students. To access these learning resources, you must enroll in the Sun Learning Connection Library which gives students open access to these resources. You can enroll in this learning resource through the learning resources tab on your AAP.
Suggested Weekly Schedule

**WEEK ONE**

**COMPETENCIES: INTERNET CONCEPTS**

**General Things to complete:**

1) Review assessment competencies.

2) Take the PASD pre-assessment.

3) Determine your experience level to get a general idea of how long these learning resources will take you to complete. (Your mentor can help you with this. Participate in your Academic Activity Verification Call with your mentor and determine required completion dates)

4) Enroll in appropriate learning resources.

| SkillSoft – Internet Fundamentals Course ID: 211522_eng |
|---|---|
| **View** | The entire course. Expected duration: 140 minutes |
| **Activities:** | 1. Review Instruction of topics |
| | 2. Complete exercises |
| | 3. Read Articles/Resources |
| | 4. Test your knowledge after each topic |

| SkillSoft – Internet Fundamentals Course ID: en_US_15119_ng |
|---|---|
| **View** | The entire course. Expected duration: 2 hours |
| **Activities:** | 1. Review Instruction of topics |
| | 2. Complete exercises |
| Activities: | 3. Read Articles/Resources  
4. Test your knowledge after each topic |

**WEEK TWO**

**COMPETENCIES: INTERNET CONCEPTS**

**SkillSoft – Web Development Fundamentals Course ID: 211519_eng**

<table>
<thead>
<tr>
<th>View</th>
<th>The entire course. Expected duration: 190 minutes</th>
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</table>

| Activities: | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |

**SkillSoft Books 24X7 – HTML, XHTML, and CSS Bible, Fourth Edition** by Steven M. Schafer  
ISBN: 9780470128619

| Read | Review Parts I and II. |

**WEEK THREE**

**COMPETENCIES: PRESENTATION LANGUAGE**

**SkillSoft – Programming with XHTML 1.1: Basic Concepts Course ID: en_US_86046_ng**

<table>
<thead>
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<th>View:</th>
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<p>| Activities: | 1. Review Instruction of topics |</p>
<table>
<thead>
<tr>
<th></th>
<th>2. Complete exercises</th>
<th>3. Read Articles/Resources</th>
<th>4. Test your knowledge after each topic</th>
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**SkillSoft – Advanced HTML Design Elements**  
Course ID: 31592_eng

<table>
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<tr>
<th><strong>View:</strong></th>
<th>The entire course. Expected duration: 180 minutes</th>
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</table>
| **Activities:** | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |

**SkillSoft Books 24X7 – HTML, XHTML, and CSS Bible, Fourth Edition** by Steven M. Schafer  
ISBN: 9780470128619

<table>
<thead>
<tr>
<th><strong>Read</strong></th>
<th>Review Parts III and IV.</th>
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<table>
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<tr>
<th><strong>Read</strong></th>
<th>Review the resource.</th>
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**WEEK FOUR**

**COMPETENCIES: APPLICATION LANGUAGE**

**Skillsoft – C++ Programming: Structured Programming**  
Course ID: 116671_eng

<table>
<thead>
<tr>
<th><strong>View:</strong></th>
<th>The entire course. Expected duration: 220 minutes</th>
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</table>
### Activities:
1. Review Instruction of topics
2. Complete exercises
3. Read Articles/Resources
4. Test your knowledge after each topic

### Week Five

**Competencies: Application Language**

### Skillsoft – C++ Programming: Overloading Course ID: 116674_eng

**View:**
The entire course. Expected duration: 220 minutes

**Activities**
1. Review Instruction of topics
2. Complete exercises
3. Read Articles/Resources
4. Test your knowledge after each topic

### Skillsoft – C++ Programming: Files and Streams Course ID: 116675_eng

**View:**
The entire course. Expected duration: 160 minutes

**Activities**
1. Review Instruction of topics
2. Complete exercises
3. Read Articles/Resources
4. Test your knowledge after each topic

### Skillsoft – C++ Programming: Programming Techniques Course ID: 116676_eng

**View:**
The entire course. Expected duration: 180 minutes
| **Activities** | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |

**WEEK SIX**

**COMPETENCIES: APPLICATION LANGUAGE**

**Skillsoft – C++ Programming: Classes and Data Abstraction**  
Course ID: 116672_eng

**View:**  
The entire course. Expected duration: 240 minutes

| **Activities** | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |

**SkillSoft – C++ Programming: Manipulating Objects**  
Course ID: 116673_eng

**View:**  
The entire course. Expected duration: 200 minutes

| **Activities** | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |
## Week Seven

### Competencies: Application Language


<table>
<thead>
<tr>
<th>Read:</th>
<th>Review the resource.</th>
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**SkillSoft TestPrep Final Exam: C++ programming ID: FE0015_eng**

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<tr>
<th>Activities:</th>
<th>Test your knowledge.</th>
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## Week Eight

### Competencies: Application Language

**SkillSoft – Getting Started with Java** Course ID: 212087_eng

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<thead>
<tr>
<th>View:</th>
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| Activities: | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |
|-------------|--------------------------------------------------|

**SkillSoft – Operators and Flow Control in Java** Course ID: 212088_eng

<table>
<thead>
<tr>
<th>View:</th>
<th>The entire course. Expected duration: 110 minutes</th>
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| Activities: | 1. Review Instruction of topics  
2. Complete exercises  
3. Read Articles/Resources  
4. Test your knowledge after each topic |
|-------------|--------------------------------------------------|
**Week Nine**

**Competencies: Application Language**

**SkillSoft – Creating Classes in Java Course ID: 212089_eng**

<table>
<thead>
<tr>
<th>View:</th>
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<tr>
<td><strong>Activities:</strong></td>
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<tr>
<td>1. Review Instruction of topics</td>
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<td>2. Complete exercises</td>
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<td>3. Read Articles/Resources</td>
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<tr>
<td>4. Test your knowledge after each topic</td>
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**SkillSoft – Working with Classes in Java Course ID: 212090_eng**

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<tr>
<th>View:</th>
<th>The entire course. Expected duration: 160 minutes</th>
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<tr>
<td><strong>Activities:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Review Instruction of topics</td>
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**TEXT BOOKS:**

**ADDITIONAL TEXT BOOKS IN THE SKILLOFT BOOKS 24x7:**

**HTML**

![HTML book](image1)

By Faithe Wempen ISBN: 9780735622630

![HTML 4 DUMMIES](image2)

By Ed Tittel and Natanya Pitts ISBN: 0764519956

**C++**

![Visual C++ 2005](image3)

By Jesse Liberty ISBN: 0672312395

JAVA
by Doug Lowe and Barry Burd ISBN: 9780470124512
TEXT BOOKS IN THE WGU-SAFARI LIBRARY:

HTML

Sams Teach Yourself HTML in 10 Minutes, Fourth Edition by Deidre Hayes


C++

Sams Teach Yourself C++ in 21 Days, Fifth Edition by Jesse Liberty, Bradley Jones


C++ Primer, Fourth Edition by Stanley B. Lippman, Josée Lajoie, Barbara E. Moo


JAVA
Head First Java, 2nd Edition
by Bert Bates, Kathy Sierra

Publisher: O'Reilly Pub Date: February 2005 Print ISBN-10: 0-596-00920-8

OTHER TEXT BOOKS:

NOTE: these are SUGGESTED resources – you are NOT required to purchase any of these books—we strongly recommend you check out the WGU Safari On-Line library BEFORE purchasing any books—you may just find what you need there.

HTML

HTML, XHTML & CSS For Dummies, ISBN: 978-0470238479, $19

C++


JAVA

The following resources are provided as a supplement to your studies, and will reinforce the skills and concepts learned with other course materials.


http://www.w3.org/TR/REC-CSS2/


GENERAL TOPICS TO PREPARE FOR:

GENERAL:

Comments in code are for what purpose?

Understand: Abstraction, Encapsulation, Polymorphism, Object-oriented Programming

C++ OR JAVA

What is the difference between single inheritance and double inheritance?

What does modifying a java interface with the word “public” do?

What are “thread” libraries?

What is java garbage collection?

What does it mean to overload an operator in C++ or Java?

What are four types of decision making statements in C++ or Java? (if, then for example)—

What is the difference between overloading and overriding in Java?

How is event handling handled in C++ and/or Java

What is a namespace?

What happens when you “push” something to a stack?

What is Java Virtual Machine used for?

What is meant by abstraction in Java?

How do you declare a constant in java?

What is Java bean technology?

What are layout subclasses in java responsible for?

What is inheritance
What does it mean when an instance of a class is created?

How do you create an object in Java?

What are methods?

What does a class define in Java?

What is typecasting?

What is recursion?

**HTML**

When the address http://www.wgu.edu is typed into a browser which three events take place at the web server?

What happens when an HTML web page transfers from the server to the client pc?

What is push technology?

What advantages does xml have over html?

How to you create an image map in html?

What is the HTML code to make an image clickable?

What is the first tag you put on an html page?

What do metatags do?