This course supports the assessments for MBT2. The course covers 7 competencies and represents 3 competency units.

Introduction

Overview
In this course, you will analyze information and communication technologies to take advantage of global market opportunities. Throughout the course, you will learn how to produce and support plans for addressing the challenges of multiculturalism and geographic dispersion as they impact information and communication technology.

You will investigate current and emerging global technologies to identify significant trends. You will also learn how to evaluate information technology initiatives in a global context to ensure that initiatives and adopted technologies align properly with your company’s organizational mission.

As you study networking technologies, standards, and procedures, you will more confidently identify the critical role of the technologies used in business, and be able to create recommendations about the adoption of communication technologies supporting an organization’s global business initiatives.

Watch the following introduction video for this course:

Note: To download this video, right-click the following link and choose “Save as…”: download video.

Competencies
This course provides guidance to help you demonstrate the following 7 competencies:

- **Competency 437.1.1: Global Market**
  The graduate analyzes information and communication technologies to take advantage of global market opportunities.

- **Competency 437.1.2: Multiculturalism and Geographic Dispersion**
  The graduate produces a plan for addressing the challenges of multiculturalism and geographic dispersion as they impact information and communication technology.

- **Competency 437.1.3: Established Technologies**
  The graduate analyzes the influence and significance of key technologies that encourage global communication.

- **Competency 437.1.4: Current Trends**
  The graduate analyzes present and emerging global technologies to identify significant trends.

- **Competency 437.1.5: Determining Stakeholder Needs**
  The graduate evaluates Information Technology initiatives in a global context to ensure alignment with organizational mission.
Competency 437.1.6: Global Technology Standards
The graduate evaluates standards and international fora and their critical role in the globalization of communication technology.

Competency 437.1.7: Technology Adoption
The graduate makes recommendations to adopt potential communication technologies that may support an organization's global business initiatives.

Course Instructor Assistance
As you prepare to successfully demonstrate competency in this subject, remember that course instructors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course instructors are excited to hear from you and eager to work with you.

Successful students report that working with a course instructor is the key to their success. Course instructors are able to share tips on approaches, tools, and skills that can help you apply the content you’re studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don’t work out on your first try, course instructors act as a support system to guide you through the revision process. You should expect to work with course instructors for the duration of your coursework, and you are encouraged to contact them as soon as you begin. Course instructors are fully committed to your success!

Preparing for Success

The information in this section is provided to detail the resources available for you to use as you complete this course.

Pacing Guide
Note: This course has a very high expectation of individual research. You will need to back up your statements with citations for all three of these tasks.

Week 1: Spend a minimum of 15-20 hours going through the required readings in the MBT2 Course of Study. Using the Assessment Tab in your Course of Study, and print out the Task Instructions and Rubrics for all three tasks. Read over these, multiple times!

Week 2: Watch the recorded webinar for this course at https://wgu.adobeconnect.com/marylberici. Then begin working on Task 1, following the required rubric sections and directions. Book time with your assigned Course Instructor for additional support.

Week 3: Submit Task 1 and begin working on Task 2, reviewing the recorded webinar for tips and potential pitfalls. Be sure and book time with your assigned CM for additional support if needed.

Week 4: Submit Task 2, and begin doing research for task 3. Review the recorded webinar to make sure you understand exactly what is required for task 3. Be sure and book time with your assigned CM for additional support.
Week 5: Continue working on task 3, reaching out to your assigned CM as necessary. Remember to back up your statements with citations. Submit Task 3 by end of week 5.

Week 6: Make appointments with your assigned Course Instructor as needed to complete any required revisions and pass this course.

Learning Resources
The learning resources listed in this section are required to complete the activities in this course. For many resources, WGU has provided automatic access through the course. However, you may need to manually enroll in or independently acquire other resources. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

Automatically Enrolled Resources
You can access the learning resources listed in this section by clicking on the links provided throughout the course. You may be prompted to log in to the WGU student portal to access the resources.

SkillSoft and Books 24x7
You will access SkillSoft items at the activity level within this course. For more information on accessing SkillSoft items, please see the “Accessing SkillSoft Learning Resources” page.

Selected reading from the following Books24x7 e-texts will be used in this course:

VitalSource E-Texts

The following textbook is available to you as an e-text within this course. You will be directly linked to the specific readings required within the activities that follow:


Ebook Central E-Books

The following textbooks are available to you as e-texts within this course. You will be directly linked to the specific readings required within the activities that follow:


Note: These e-texts are available to you as part of your program tuition and fees, but you may purchase hard copies at your own expense through a retailer of your choice. If you choose to do so, please use the ISBN listed to ensure that you receive the correct edition.

Understanding Global Market Opportunities

In this section, you will learn how to analyze information and communication technologies to take advantage of global market opportunities.

Globalization Essentials

You will learn how to analyze information obtained from individuals around the globe.

This topic addresses the following competency:

- Competency 437.1.1: Global Market
  The graduate analyzes information and communication technologies to take advantage of global market opportunities.

Understanding Global Market Opportunities - Video

Spend eight minutes viewing this video to get a broad overview of factors that affect globalization efforts; some of them may surprise you.

Fundamentals of Globalization
Read the following section in *The Fundamentals of Globalization: The Global Context* SkillSoft module:

- The Global Context

After you have reviewed this section, complete the following prompts:

1. In what way is the practice of outsourcing an outgrowth of globalization?
2. A company can take advantage of globalization in regards to employees and markets. In a brief one-page essay, discuss ways in which companies can embrace globalization, especially through the use of modern technologies.

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**The Web as a Tool**

Read the following chapters in *Research on Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*:

- chapter 1 ("Web X.0—A Road Map")
- chapter 2 ("An Overview and Differentiation of the Evolutionary Steps of the Web X.Y Movement—The Web Before and Beyond 2.0")

Based on the reading, answer the following questions:

- How can the Web be used to obtain and store content, as well as contribute to the creation of new content for customers?
- In what way can advanced web technologies help develop markets that were unavailable five years ago?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

Using both the reading and results from an internet search engine, provide definitions to the terms in the table below:

<table>
<thead>
<tr>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>OWL</td>
</tr>
<tr>
<td>XML</td>
</tr>
</tbody>
</table>
Consider the following scenario:

You are the CIO of a company named Kayaking Central. Your company specializes in reviews of all equipment, issues, and trends related to whitewater and ocean kayaking.

Mary Tyson, who directs the marketing department, has created a written proposal asking your division to create a submission engine that all employees and partners worldwide will be allowed to access after they have authenticated. This submission engine will allow employees to submit ideas concerning future trends related to kayaking.

Given the information you have read in chapters 1 and 2 of *Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*, what technologies and approaches would you consider using to implement this submission engine?

**Technologies Used in Globalization**

Read the following chapters in *Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*:

- chapter 11 ("Towards Web 3.0—A Unifying Architecture for Next Generation Web Applications")
- chapter 18 ("Accessing, Analyzing, and Extracting Information from User Generated Contents")
- chapter 19 ("Wiki Semantics via Wiki Templating")
- chapter 20 ("Towards Disambiguating Social Tagging Systems")

Answer the following reading-response questions:

- In what ways can the architecture be used to receive input from multiple cultures?
- What elements would be necessary to help individuals around the world submit content?
- What security measures should be put in place?
- How would you explain this architecture to a business associate without a technical background?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**Technology: Taking Advantage of the Global Market**
Of all the modern technologies used today, social networking is uniquely poised to help companies obtain and organize user-generated input. You will investigate these technologies.

**Social Networking and Tagging**

Social networking uses informal and formal groups to generate relevant content. Social tagging finds a framework that will make information created by social networks useful for searches and for creating content.

You will learn more about social tagging, folksonomies, and social tagging systems.

This topic addresses the following competency:

- **Competency 437.1.1: Global Market**
  The graduate analyzes information and communication technologies to take advantage of global market opportunities.

**Technology: Taking Advantage of the Global Market Video**

Start by viewing this six minute video. It is a marketing piece for a consulting firm, but the statistics are insightful nonetheless.

**Using the Social Web**

Read the following sections in *Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*:

- chapter 28 (“On Using Wiki as a Tool for Collaborative Online Blended Learning”)
- chapter 12 (“Web 2.0—Social Bookmarking—An Overview of Folksonomies”)
- chapter 16 (“Improving Cross-Language Information Retrieval by Harnessing the Social Web”)
- chapter 42 (“Embracing the Social Web for Managing Patterns”)

Answer the following reading-response prompts:

- Describe how folksonomies can be used to capture and organize content from multiple cultures.
- Describe two positive elements of Wikis, as well as two negative impacts of using Wiki. As you describe the weaknesses, consider how you would overcome these issues.

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**Practical Uses of Wikis in the Public Domain**

Many institutions and organizations make use of Wikis daily. Some of these resources are available for public consumption. Review the following Wikis:
Multiculturalism and Geographic Dispersion

This section discusses how technologies are used to address challenges involved in connecting disparate cultures.

Multiculturalism, Your Business, and the Web
As businesses become more global, multiple cultures will need to be connected with each other in newly sophisticated ways.

This topic addresses the following competency:

- Competency 437.1.2: Multiculturalism and Geographic Dispersion
  The graduate produces a plan for addressing the challenges of multiculturalism and geographic dispersion as they impact information and communication technology.

Multiculturalism and Geographic Dispersion Video

Before getting too wrapped up in the technology though, take a look at how easy it is to err in multicultural dealings. The video comes in at under six minutes, and you will probably discover a thing or two you didn't know.

The Rules of Cross-Cultural Communication

Read the following sections in *Multicultural Intelligence: Eight Make-or-Break Rules for Marketing to Race, Ethnicity, and Sexual Orientation*:

- chapter 1 ("Melting Pots, Multiculturalism, and Marketing to the New America")
- chapter 6 ("Post-Ethnic America and People of Mixed Race")
Building Virtual Teams

Read the following chapter in *E-Collaboration Technologies and Organizational Performance: Current and Future Trends*:

- **chapter 16** (*An Empirical Study of Building Social Relationships within Virtual Teams*)

Management From a Distance

The challenges of managing teams across long distances have been well documented. The following texts investigate many of the challenges. Read the following chapters in the listed texts:

*Information Communication Technologies and Emerging Business Strategies*

- **chapter XIII** (*Organizing Across Distances—Managing Successful Virtual Team Meetings*)

*Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*

- **chapter 27** (*University 2.0—Embracing Social Networking to Better Engage the Facebook-Generation in University Life*)

Consider the following reading-response questions:

- How can the principles of managing people across distances be applied to social networks?
- In what way can social networks become detrimental to virtual teams?
- How can social networking technologies be used properly in business?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

Managing Virtual Teams

Complete the following courses in SkillSoft to learn more about managing virtual teams:

- [Leading Teams: Managing Virtual Teams](#)
- [Leading High-performance Virtual Teams](#)

Multiculturalism and Opportunities in the Market

The discussion of multicultural teams is continued.

Globalization Employee Management

From traditional, face-to-face approaches to Facebook, managing employees across multiple geographies and markets has fast become a standard part of the workforce.
You will learn more about managing geographically widespread individuals and teams via technology solutions.

This topic addresses the following competency:

- Competency 437.1.2: Multiculturalism and Geographic Dispersion
  The graduate produces a plan for addressing the challenges of multiculturalism and geographic dispersion as they impact information and communication technology.

**Multiculturalism and Opportunities in the Market Video**

Did you know that global management standards exist? View this video on the ISO 9000 standard, but be aware that there are others. There is as yet no universally accepted standard.

**Management: Rising to the Challenge**

Part of understanding multiculturalism and geographical dispersion in today's workplace is identifying specific issues concerning the global workforce.

Review the following chapters in *Managing a Global Workforce: Challenges and Opportunities in International Human Resource Management*:

- chapter 1 ("Introduction and Overview")
- chapter 2 ("Cultural Foundations of International Human Resource Management")

**Improving Performance and Strengthening Relationships**

Read the following chapters in *Managing a Global Workforce: Challenges and Opportunities in International Human Resource Management*:

- chapter 9 ("Global Workforce Performance management")
- chapter 11 ("Global Employee Relations")

**The Multicultural Workplace**

You will investigate the challenges and opportunities that multiple cultures afford in today's global workplace.

This topic addresses the following competency:

- Competency 437.1.2: Multiculturalism and Geographic Dispersion
  The graduate produces a plan for addressing the challenges of multiculturalism and geographic dispersion as they impact information and communication technology.

**New Ways of Learning: Multiculturalism on the Web**

Read the following chapter in *Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*:
Consider the following reading-response questions:

- What are some of the ways a manager can help build trust using Web 2.0 technologies?
- The text mentions the "digital divide." This course assumes your company will be able to provide all of the computer equipment and network connectivity necessary for its employees. However, what will you do to train individuals who are not yet ready for the digital age?
- How will you keep individuals from unproductive Web surfing and wasting time?

Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

**Addressing Multiple Cultures and Geographic Dispersion**

To many enthusiasts, technology has promised to help connect people in new ways; however, skeptics point out that new technologies can simply speed up and automate cultural misunderstandings and cause even more productivity issues.

Read the following chapter in *Social Networking Spaces: From Facebook to Twitter and Everything In Between*:

- chapter 1 ("Carpe Diem! Capture, Preserve, and Share Your Adventures on Social Networks")

**Globalization and the Individual**

Read the following chapter in *Social Networking Spaces*:

- chapter 18 ("Going Global: Connecting with People in Other Countries and Languages, with Google Translate and Google Multilingual Chat")

**Using Technology Worldwide**

This section investigates how students can use existing technologies to address global markets and new business opportunities.

**Technologies and Managing Content**

The use of technology to encourage communication in the company is your responsibility as a network manager.

In this section, you will learn more about how today's technologies can help you encourage global communication.

This topic addresses the following competency:

- Competency 437.1.3: Established Technologies
  The graduate analyzes the influence and significance of key technologies that
encourage global communication.

Using Technology Worldwide Video

Watch this excellent video from TED about the global impact of all kinds of tech, and be sure to also watch the brief IMB add-on. The total running time is less than ten minutes.

Investigating Web 2.0: The Latest Take

Complete the following course in SkillSoft:

- Web 2.0 Fundamentals

Answer the following questions:

- In what way can SOAP help improve communications in your company using a Web-based platform?
- How can frameworks such as AJAX help companies address the needs of workers who use mobile devices such as smart phones and tablets to communicate more effectively?
- Web 2.0 promises that technologies such as HTML, HTML5, JavaScript, XHL, AJAX, SOAP, and others create more active users. In what way do you see this promise being fulfilled? Or, is the promise of Web 2.0 an illusion? Explain your response in a two-paragraph answer.

Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

XML: How to Describe and Organize Content

Complete the following course in SkillSoft:

- XML Language Basics

Answer the following questions:

- How can a well-formed XML document help your company organize data?
- How will an XML schema help a company match user-generated content to its business needs?

Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

The Promise of Social Content

Employees are not the only things that are global; content is also something generated worldwide.

This topic addresses the following competency:
Competency 437.1.3: Established Technologies
The graduate analyzes the influence and significance of key technologies that encourage global communication.

Social Networking Technologies and Business

Read the following chapters in *10 Steps to Successful Social Networking for Business*:

- chapter 1 ("Step One: Understand the Technology and Identify Business Benefits")
- chapter 2 ("Step Two: Identify Sales, Brand, and Organizational Value")
- chapter 3 ("Step Three: Choose the Right Technology")
- chapter 4 ("Step Four: Tie Social Networking to Key Business Drivers")

Consider the following reading-response questions:

- Which of the tools is most effective for a business that wishes to obtain user-generated content?
- Which of the tools is most effective to help geographically disbursed virtual teams communicate effectively?
- As you choose a technology, how can you explain the steps to non-technical individuals so that they understand your thinking process?
- In what way do Wikis help a company, and how do they differ from something like LinkedIn or Facebook?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

Putting it All Together

Read the following sections in *10 Steps to Successful Social Networking for Business*:

- chapter 5 ("Step Five: Get the Organization Engaged and Connected")
- chapter 6 ("Step Six: Launch the Social Networking Initiative")
- chapter 7 ("Step Seven: Build Success One Day at a Time")
- chapter 8 ("Step Eight: Make It Personal- Get Customers to Love Your Business")
- chapter 9 ("Step Nine: Connect Your Business to the World")
- chapter 10 ("Step Ten: Keep Up with New Technologies and Thrive")

Consider the following reading-response questions:

- As an Information Technology expert, how can you anticipate network connectivity issues that may occur as thousands, tens of thousands, or even hundreds of thousands of individuals respond?
- In what ways can you help filter out insignificant changes and focus on useful tools and important trends?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*
Using Technologies to Address New Opportunities

Read the following chapters in Social Media at Work: How Networking Tools Propel Organizational Performance:

- chapter 1 ("Social Media at Work")
- chapter 2 ("The Changing Landscape and What it Means to You")
- chapter 3 ("What is Social Media, and How Does it Work?")
- chapter 4 ("Where Social Media Has an Impact")

Answer the following reading-response questions:

- In what ways can social networks help you identify talented, younger individuals?
- In what way can social networks help you work with individuals from other cultures?
- What are the five benefits of social media to Cisco Systems?

Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

The Impact of Social Networking

Social networking is a key technology that encourages global communication.

Putting the "Work" in Social Networking

You will learn about how the proper use of social networking can have very real business impacts.

This topic addresses the following competency:

- Competency 437.1.3: Established Technologies
  The graduate analyzes the influence and significance of key technologies that encourage global communication.

The Impact of Social Networking Video

This next video reminds us that business goals should drive technology, not the other way around. The video is a panel discussion, so it isn't exciting, but what is discussed helps to ground business in what is important.

Organizational Performance and Social Networking

Read the following chapters in Social Media at Work: How Networking Tools Propel Organizational Performance:

- chapter 6 ("Putting Social Media to Work")
- chapter 7 ("Looking to the Future")
Answer the following reading-response questions:

- In what five different ways did Emergent Solutions employ Wikis in its workplace?
- In chapter 6, the authors outline six ways to implement social media adoption in a business. Provide a brief summary of these methods.
- What are some of the critical steps for involving others in your organization?
- What are some of the privacy and access issues that are likely when implementing social networking?
- In what ways will social networking help companies tap into the power of diverse populations?
- In what ways will shared knowledge help a business set goals and improve communication?
- How will social media tools get smarter?
- Chapter 7 contains a section entitled, "How Society will Use Social Media." This section contains a very positive perspective on social media. Create a three-paragraph summary of the perspective found in this section. Then, in a bullet point list, suggest at least three ways that social networking can cause problems if not properly implemented and monitored.

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**Critical Technologies and Your Business**

Read the following chapter in *Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*:

- chapter 46 ("Online Human Activity Networks (OnHANs)—An Analysis Based on Activity Theory")

Answer the following reading-response questions:

- Of the twelve different types of "Online Human Activity Networks" outlined in the section "Definition and Typology of OnHANs," which are likely the most effective for a company interested in obtaining information from its customers (i.e., end users)?
- Which type of network is most useful for obtaining information from business partners?
- Consider networks such as LinkedIn and Facebook. In a brief three-paragraph discussion, compare and contrast their relative strengths and weaknesses.

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

Consider the following scenario:

XYZ company manufactures cutting-edge athletic shoes. This company has a global presence. It has worldwide manufacturing companies, mostly in Malaysia and China. Top sports figures endorse products created by this company. It has a global market, though it currently enjoys
strongest penetration in the United States and European markets. The goal is to sell its products into emerging markets in China and South America.

This company wishes to use social networking to do more than sell its existing products into these markets. It wishes to use social marketing technologies to gather market intelligence and obtain data that its marketing team can analyze.

The marketing director has approached you with the task of implementing third-party and native Web platforms to obtain this data. You have discussed the idea loosely in two meetings, and she has asked you to come up with a diagram of how her marketing team, your IT team, and other elements of this social networking campaign all work together.

Using the elements found in chapter 46, including the conceptual framework outlined in the section "Activity Theory as a Theoretical Perspective," create a simple outline of each of the elements involved. You may not be able to use all of the elements. Still, work to show how your department will use technologies to fulfill a business goal.

**Identifying Trends**

You will learn more about the practice of identifying new trends.

**Future Technologies You Need to Know Now**

You will learn more about essential cloud computing concepts. Learning these fundamental elements will help you sift through all of the claims and fads to identify true, useful technology trends for your organization.

This topic addresses the following competency:

- **Competency 437.1.4: Current Trends**
  The graduate analyzes present and emerging global technologies to identify significant trends.

**Identifying Trends Video**

There are many views about which tech trends are most significant. We'll look at the clear front runner - cloud computing, but it's worth a brief look at another trend - the consumerization of IT.

Watch the following video on the Changing Nature of Work - Trend One Technology:

**Cloud Computing Essentials**

Complete the following course in SkillSoft:

- **Introducing Cloud Computing**
- **A Deeper Understanding of Cloud Computing**

Read the following chapters in *Handbook of Cloud Computing*:
• chapter 14 (“Cloud Types and Services”)
• chapter 10 (“Enterprise Knowledge Clouds: Architecture and Technologies”)

Answer the following reading-response questions:

• What is the essential difference between a public and private cloud?
• In one paragraph, describe the concept of Infrastructure as a Service (IaaS). Provide at least one example.
• What is Platform as a Service (PaaS)? Provide at least two examples.
• Summarize the business and enterprise management architectures in one page.
• There are three fundamental technologies in cloud computing: virtualization, automation, and scheduling. Create a one-paragraph summary of each of these technologies. In each summary, provide one real-world example of each.

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**Designing and Developing for the Cloud**

HTML5 is a relatively new standard that gives designers and developers more stable platforms to create sophisticated solutions.

Review the following web pages to learn more about HTML5:

• What are the top features of HTML5?
• HTML5 Overview
• HTML5 Features: What Web Developers Can Use NOW

Watch the following video:

• Separating Fact from Fiction

Complete the following course in SkillSoft:

• Introduction to HTML5 and CSS3

Answer the following reading-response questions:

1. Why are native video support, offline storage, and support for structured storage with indexing support important to globalized companies? In other words, how can using HTML5 be useful for implementing Web 2.0/3.0 solutions?
2. In what ways can HTML5 become a foundation for Web-based applications enabling group-based collaboration?
3. In what ways does HTML5’s focus on the content go over and above mere presentation of data?

*Note: These questions should be answered in your notebook. Take these questions seriously,*
as they will help you when completing your performance tasks.

Heavy-Duty Programming Frameworks: PHP, Ruby, Java (J2EE) and .Net

Review the following resources:

- "An Overview of PHP"
- "Ruby on Rails: Simpler than J2EE"
- "The Java Language: An Overview"
- "I understand why people use .NET, Java, and PHP. Why do they use Ruby on Rails?"
- "Overview of the .NET Framework"
- "Putting Ruby, Rails, C#, and ASP.NET in context"
- "Java versus Ruby on Rails versus .Net"
- "Ruby on Rails 3 – An Overview"
- "Java vs. Ruby on Rails - It is a Dead Heat"

Cloud Computing and Today's Computing Languages: Justifying Your Choices

Conduct an internet search to learn more about Ruby on Rails, Java, and .NET and how they work in cloud-based computing environments.

For each of the following questions, provide an answer that is approximately one page in length:

- Of the technologies discussed above, which seems most suited to cloud-based computing for a small business? Justify your decision using specific examples or features of the language.
- Similarly, of the technologies discussed above, which seems most suited to cloud-based computing for a large "enterprise" business? Again, justify your decision using examples or specific features found in the language.

Note: There is no single correct answer; however, it is important for you to justify your opinion using facts about the language.

Cloud Computing: Migrating Services and Mitigating Risks

In this section, you will investigate tasks, procedures, and common issues associated with migrating existing issues to the cloud. You will also learn about the current risks associated with both traditional and cloud computing. You will investigate ways to mitigate risk through security measures

Migrating to the Cloud

You will investigate issues involved in migrating infrastructure to the cloud.

This topic addresses the following competency:

- Competency 437.1.4: Current Trends
  The graduate analyzes present and emerging global technologies to identify significant trends.

Cloud Computing: Migrating Services and Mitigating Risks Video
The following video comes from SalesForce.com. To date, it has received over a million views on YouTube - that's a lot for a marketing video. It is called, 'What is Cloud Computing?', so lots of viewers now have the SalesForce view of cloud computing. Is it a good one?

**Issues Involved With Migrating Solutions to the Cloud**

Complete the following course in SkillSoft:

- **Migrating Infrastructure to the Cloud**

Answer the following questions:

- What about Service Oriented Architecture (SOA) helps you provide more services than traditional architectures?
- What are the critical steps for analyzing your current infrastructure so that you can discover if your business's network infrastructure is an ideal candidate for migration to the cloud?
- What are the typical problem areas and necessary steps to take when migrating services to the cloud?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**Making a Business Case for Migrating to the Cloud**

Read the following chapter in *Cloud Computing: A Practical Approach*:

- chapter 4 ("The Business Case for Going to the Cloud")

Answer the following reading-response questions:

- Choose three of the top operational and economic benefits of the cloud and explain why you think they are the most important. Whenever possible, cite specific examples.
- To many, migrating to the cloud implies you will no longer have a data center of any kind, yet some feel that certain elements should be kept. What elements should be kept according to the reading?
- When planning a migration, it is suggested that starting small is a good idea. What are the suggested ways to start small, and what is the primary justification for avoiding large-scale migrations?

*Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.*

**Securing the Cloud**

One of the primary issues involved in using cloud-based services is security. In order to move any service to the cloud with confidence, it is vital that you consider all of the issues involved.
This topic addresses the following competency:

- **Competency 437.1.4: Current Trends**
  The graduate analyzes present and emerging global technologies to identify significant trends.

### Cloud Security Essentials

One of the primary elements of cloud security is choosing the appropriate Cloud Service Provider (CSP).

In the following course in SkillSoft, you will learn about specific steps that allow you to make this choice with confidence, including making sure that responsibilities are clearly defined.

- **Providing Cloud Security**

### Cloud Security and Software as a Service (SaaS)

The software you provide must be properly secured. The following course in SkillSoft outlines steps you can take to make sure that the software you obtain from a cloud service provider is as secure as possible.

- **Securing Applications, Virtualized Environments, and Cloud Computing**

### Identifying Security Challenges

Typical issues such as

- weak encryption,
- distributed denial of service attacks, and
- social engineering

remain critical issues in both traditional and cloud-based implementations.

Read the following chapter in *Cloud Security: A Comprehensive Guide to Secure Cloud Computing* to investigate specific examples and issues related to security and the cloud.

- **chapter 5 ("Cloud Computing Security Challenges")**

Answer the following reading-response questions:

- For decades, security professionals have lamented the fact that network administrators avoid creating a solid, written security policy. In what way does the lack of a security policy have an even more detrimental effect to a company’s security once it has migrated to the cloud?
- What are the critical elements of a Computer Security Incident Response Team (CIRT)?
- What is the difference between a Type 1 virtual environment and a Type 2 virtual environment?
Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

Auditing the Cloud

No system is secure unless it is systematically audited.

Read the following chapters in *Auditing Cloud Computing: A Security and Privacy Guide*, which outline typical auditing and IT governance issues involved in cloud computing.

- chapter 2 ("Cloud-Based IT Audit Process")
- chapter 3 ("Cloud-Based IT Governance")

Disaster Recovery and the Cloud

As important as it is to identify typical attacks and conduct regular auditing, a truly secure cloud-based network is capable of withstanding both man-made and natural disasters.

Read the following chapter in *Cloud Security: A Comprehensive Guide to Secure Cloud Computing*:

- chapter 3 ("Cloud Computing Software Security Fundamental")

Answer the following reading-response questions:

- What are the essential elements of a Business Impact Assessment (BIA)?
- Why is a vulnerability assessment a critical part of the BIA?
- What are the typical steps in performing a vulnerability assessment?

Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

Matching Technologies to Needs: Stakeholders and Initiatives

When evaluating required technologies for an IT initiative, it is always important to obtain input from relevant stakeholders. Sometimes stakeholders are technical personnel in the IT department, but more often than not, stakeholders are executives with little or no technical knowledge. These individuals do, however, usually have extensive knowledge about the company, and usually have important information and input concerning how the company should run.

You will learn about how to plan initiatives and work with stakeholders.

**IT Strategies for Stakeholders**

You will learn more about ways to

- create plans,
define strategies, and
obtain buy-in from all relevant parties concerning any IT-specific initiative you wish the company to undertake.

This topic addresses the following competency:

- Competency 437.1.5: Determining Stakeholder Needs
  The graduate evaluates Information Technology initiatives in a global context to ensure alignment with organizational mission.

**Matching Technologies to Needs: Stakeholders and Initiatives Video**

In three minutes, this video successfully summarizes stakeholders and stakeholders theory. It is worth the time to view it.

**Creating an IT Strategy**

Complete the following course in SkillSoft:

- [IT Strategy Essentials: Creating an IT Strategy Plan](#)

When you are finished, create a one-page summary of the course.

**Developing a Plan**

Complete the following course in SkillSoft:

- [Developing and Deploying Strategic Plans](#)

When you are finished, create a one-page summary of the course.

**Global Initiatives**

Complete the following courses in SkillSoft:

- [The Process of Globalizing a Product or Service](#)
- [Green Business: Implementing Sustainability Strategies](#)

**Standards and Technologies**

Remaining current in the IT field requires that you understand the underlying standards used to define them.

In this section, you will learn more about networking and programming standards that will help you remain current throughout your career.

**Networking Standards**

You will learn about essential standards relevant to both cloud-based networking and programming.
This topic addresses the following competencies:

- Competency 437.1.6: Global Technology Standards
  The graduate evaluates standards and international fora and their critical role in the globalization of communication technology.
- Competency 437.1.7: Technology Adoption
  The graduate makes recommendations to adopt potential communication technologies that may support an organization’s global business initiatives.

Traditional Networking Standards: An Overview

The following two sites document networking standards:

- The Internet Society
  Responsible for maintaining standards documents called Requests for Comments (RFC).
- Internet Corporation for Assigned Names and Numbers (ICANN)
  Develops standards for the use of TCP/IP, including IP address and domain name assignment.

Cloud Terms, Concepts, and Standards

Read the following chapters in Executive's Guide to Cloud Computing for a useful overview of cloud architectures and standards.

- chapter 2 ("Concepts, Terminology, and Standards")
- chapter 6 ("Cloud Architecture, Modeling, and Design")

Investigating Cloud Standards

Read the following chapter in Cloud Computing: A Practical Approach for specific standards used in cloud computing.

- chapter 8 ("Standards")

Answer the following reading-response questions:

- What is it about the Hypertext Transfer Protocol (HTTP) that makes it ideal for globalized communication?
- Virtualization has become a de facto standard in regards to the cloud and globalized services. What are the elements of the Open Virtualization Format (OVF), and why are such standards important to the practice of virtualization?
- What standards body is responsible for establishing HTTP, HTML, and JavaScript?

Note: These questions should be answered in your notebook. Take these questions seriously, as they will help you when completing your performance tasks.

Standards for Programming Languages

Review the following sites and pages for information regarding programming languages:
Now that you have reviewed the above sites, you know where to go when you wish to obtain the latest information about these languages.

**Keeping Current**

While standards are important, forums also exist that help you remain current concerning the IT profession. For this activity, visit the forums and sites listed in the following table:

<table>
<thead>
<tr>
<th>Forum</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slashdot</td>
<td>A respected community-based news forum. News stories are submitted by users, and fellow users then comment on the story.</td>
</tr>
<tr>
<td>The Register UK</td>
<td>A respected news site for all IT professionals, led by a select team of editors.</td>
</tr>
<tr>
<td>Linux Today</td>
<td>A respected news site devoted to the Linux operating system.</td>
</tr>
<tr>
<td>PC Magazine</td>
<td>A site related to general computing.</td>
</tr>
<tr>
<td>Cloud Computing Magazine</td>
<td>Specifically dedicated to cloud computing professionals.</td>
</tr>
<tr>
<td>San Jose Mercury News</td>
<td>A community newspaper, but based in Silicon Valley, California.</td>
</tr>
</tbody>
</table>

Many other sites exist. Consider creating your own list of sites and sharing it with fellow IT professionals so that you can learn about the best sites to keep you informed about the latest developments in the IT profession.

**Final Steps**

Congratulations on completing the activities in this course of study! Now you must complete and submit the three performance assessment tasks for this course. Please consult with a Course Instructor if you have any questions about these assessments.