

## DESIGNING A DYNAMICS AX CLASS: A CURRICULUM PACKAGE FOR AN ENTERPRISE MODELS COURSE

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**Abstract:** This paper illustrates how a course that integrates Microsoft Dynamics AX 2012 into the curriculum is developed. The course could be used in both the undergraduate and graduate levels. At the undergraduate setting, this would be appropriate for senior-level students. At the graduate level, more time can be spent on management issues, such as change and project management. Determining the course objectives is the most important task once you decide to integrate Dynamics AX into your classroom. Once the objectives have been created, the course development begins. Examples of a course description, student assessments, resources, and a tentative schedule are included

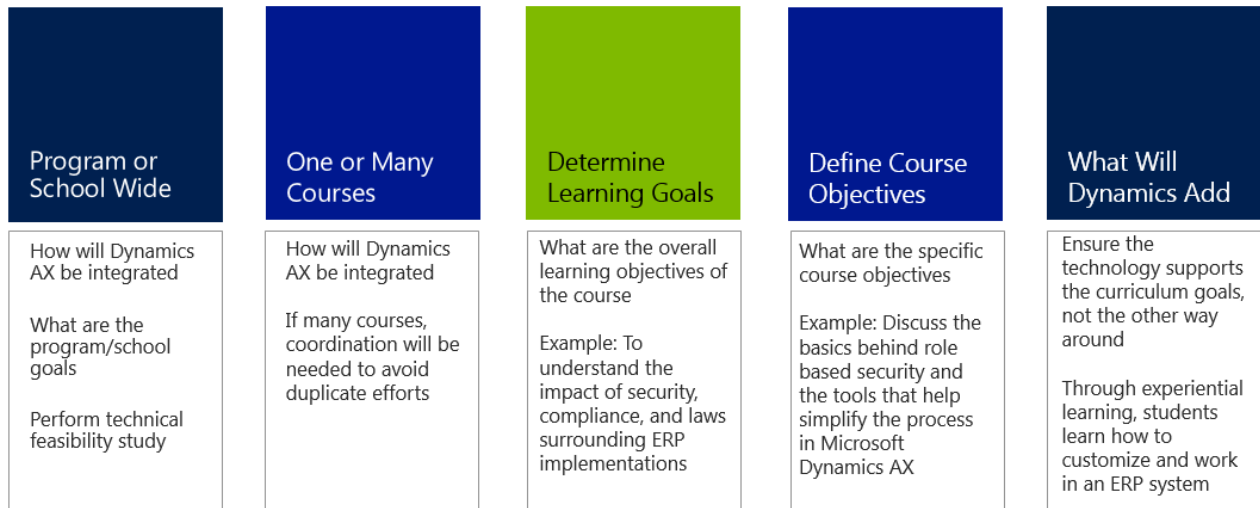
### INTRODUCTION

This curriculum package provides an overview of an existing enterprise resource planning (ERP) systems course at Duquesne University in Pittsburgh, PA. The focus of the course is on the strategic use of ERP systems to help businesses achieve organizational goals. Additionally, through experiential learning via Microsoft Dynamics AX 2012 (Dynamics AX), students learn how to work with a live ERP system. Because ERP software is an implementation of best-in-class business processes, it simulates real-world business functions, provides seamless integrated information for business operations and decision making, and supports the enterprise in linking, utilizing, allocating and controlling its resources on a real-time basis. Through both hands-on and lecture components within the course, students learn how an ERP enhances enterprise performance by streamlining enterprise processes, optimizing its resources, and allowing it to assist in making quick, accurate, and consistent decisions.

### Specific Course Goals and Learning Objectives

Determining the specific course goals and learning objectives are the most important and probably the most challenging task once you decide to integrate Dynamics AX into your classroom. First and foremost, determine whether Dynamics AX will be a program- or school-wide venture. The saying, “Go big or go home” is not the thought process that should be used. When initially determining what type of venture is being considered, you can establish a long-term plan for integrating Dynamics AX throughout the school. However, slow and steady wins the race. Determine which program, such as information systems management, supply chain management, accounting, or marketing, will have the best results and biggest impact. We determined that the information systems management program could benefit most from integrating ERP into its curriculum, and began with one course—the Enterprise Models course (see figure 1).

Before the specific course goals and learning objectives were established, textbooks were evaluated to determine how the course would be facilitated. Once the textbook was chosen, the learning objectives were formed. Several resources may need to be utilized in order to ensure that you are covering what you would like to cover in the course (see appendix 1 for sample specific course goals, learning objectives, and resources). Additionally, ascertain whether the technology supports the curriculum goals by asking what Dynamics AX will add to the course.



**Figure 1: How to Determine the Course Objectives**

**Establishing a Timeline**

Once the specific course goals and learning objectives are created, a tentative course schedule can be formulated from the selected resources. Students seem to enjoy a balance of theory and application. The tentative schedule below is for a 15-week course. Items in bold are the Dynamics AX topics and lessons.

- Week 1            Pre-test  
                  Introduction to Enterprise Systems for Management
- Week 2            **Overview of Microsoft Dynamics AX 2012**
- Week 3            System Integration and Enterprise Systems Architecture
- Week 4            **Technical capabilities and systems administration in Microsoft Dynamics AX 2012**
- Week 5            Development Life Cycle
- Week 6            **Lifecycle optimization with Microsoft Dynamics AX 2012**
- Week 7            Implementation Strategies
- Week 8            Software and Vendor Selection
- Week 9            **Project structure, estimation, and release management with Microsoft Dynamics AX 2012**
- Week 10          Midterm exam
- Week 11          Operations and Post-implementation
- Week 12          Program and Project Management
- Week 13          **Project planning and management with Microsoft Dynamics AX 2012**
- Week 14          Organizational Change and Business Process Reengineering
- Week 15          **Change management with Microsoft Dynamics AX 2012**
- Week 16          Workflow diagrams in Microsoft Dynamics AX 2012
- Week 17          Global, Ethics, and Security Management
- Week 18          **Discuss the basics behind role based security, the considerations to be made when it comes to planning security for ERP implementation, and the tools that help simplify the process in Microsoft Dynamics AX 2012**
- Week 19          Supply Chain Management

Customer Relationship Management  
 Week 15 **Demonstrate Microsoft Dynamics AX 2012 mobile apps and the basics of their configuration**  
 Final Exam  
 Post-test

## INTEGRATING DYNAMICS AX INTO THE CLASSROOM

Because of the plethora of resources available from Microsoft, there are many ways in which Dynamics AX can be integrated into the classroom. One of the more easy and effective methods is to use materials that are available on Microsoft's CustomerSource website. For example, the Introduction to Dynamics AX materials introduce students to Contoso Entertainment Systems, a fictitious company created by the Microsoft Corporation. If students have access to Dynamics AX outside of your classroom, they could work through the introductory exercises on their own prior to your getting into the more complex functionalities of the ERP. Some available lessons include:

1. **Contoso Entertainment Systems Story:** This hands-on introduction familiarizes students to what Contoso Entertainment Systems is, how it began, and how Stan, the owner, configured his ERP system to fit the needs of his organization. Students can walk through Dynamics AX while reading through the story. This will help them learn how to navigate the system.
2. **Lab 1: Part 1:** The purpose of this exercise is to become familiar with registering the basic data in Microsoft Dynamics AX. Students are performing the tasks of Nancy's assistant (Nancy is responsible for all trade processes for Contoso).
3. **Lab 1: Part 2:** The purpose of the following exercise is to get familiar with registering sales and purchase operations according to the direct deliveries process flow for Contoso. Students are performing the work of Nancy's assistant.
4. **Lab 1: Part 3:** The purpose of the following exercise is to become familiar with registering sales and purchase operations involving a warehouse according to basic process flows for Contoso. Students are performing the task of Nancy's assistant.
5. **Lab 1 Assignment:** The purpose of this assignment is to assess students on their ability to navigate the ERP system as well as retrieve information because these two tasks will play a vital role as they work through the course.

Because the students in this course would be configuring the ERP system after the "technicians" have performed a vanilla implementation, students would begin their classroom experience with configuring the ERP system. This includes configuring items such as currency, tax rates, and roles, just to name a few. If students are not able to have their own instance of Contoso Entertainment Systems, then note that once one student makes changes to settings such as the tax rate, the change is global, which means that the rest of your students will already see the change and will not get to experience altering it. When the ERP is installed, there are many instances of Contoso Entertainment Systems, which could be a global company or located in a different country. You could assign each student to their own company, or if you have more students than you have available companies, perhaps place them in teams.

Once students have a basic understanding of navigating and configuring the system, you can then begin covering the Dynamics AX items outlined in the tentative schedule. Some or all of the following basic data setup and configuration activities could be performed prior to running the business processes. If students do not have their own instance, these could be demonstrated by the instructor.

1. **Address Book Parameters:** The address book can be configured to make certain that Microsoft Dynamics AX notifies users if they are trying to create duplicate records. This will check for duplicate records for all entities that use the global address table including customers, vendors, workers, and contact people.
2. **New Employees:** A new employee can be entered into the system which will lead to discussions about assigning positions and setting up a vendor account if the new employee will have an expense account as shown in figure 2.

3. **Operating Units:** A new operating unit can be created, such as a new department within the existing organization.
4. **Organizational Hierarchies:** These allow users to view the organization from different perspectives, such as a hierarchy of legal entities for tax, legal, or statutory reporting. This would change the graphical representation of the organizational hierarchy, which is a great way for students to view how the organization is configured as shown in figure 3.

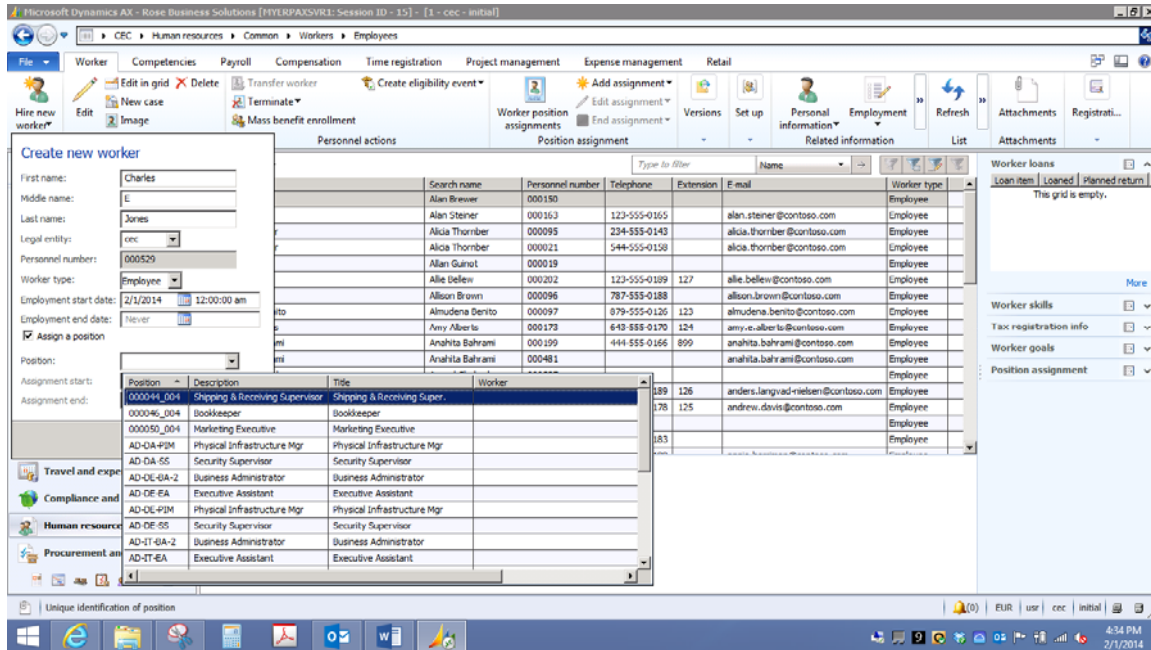
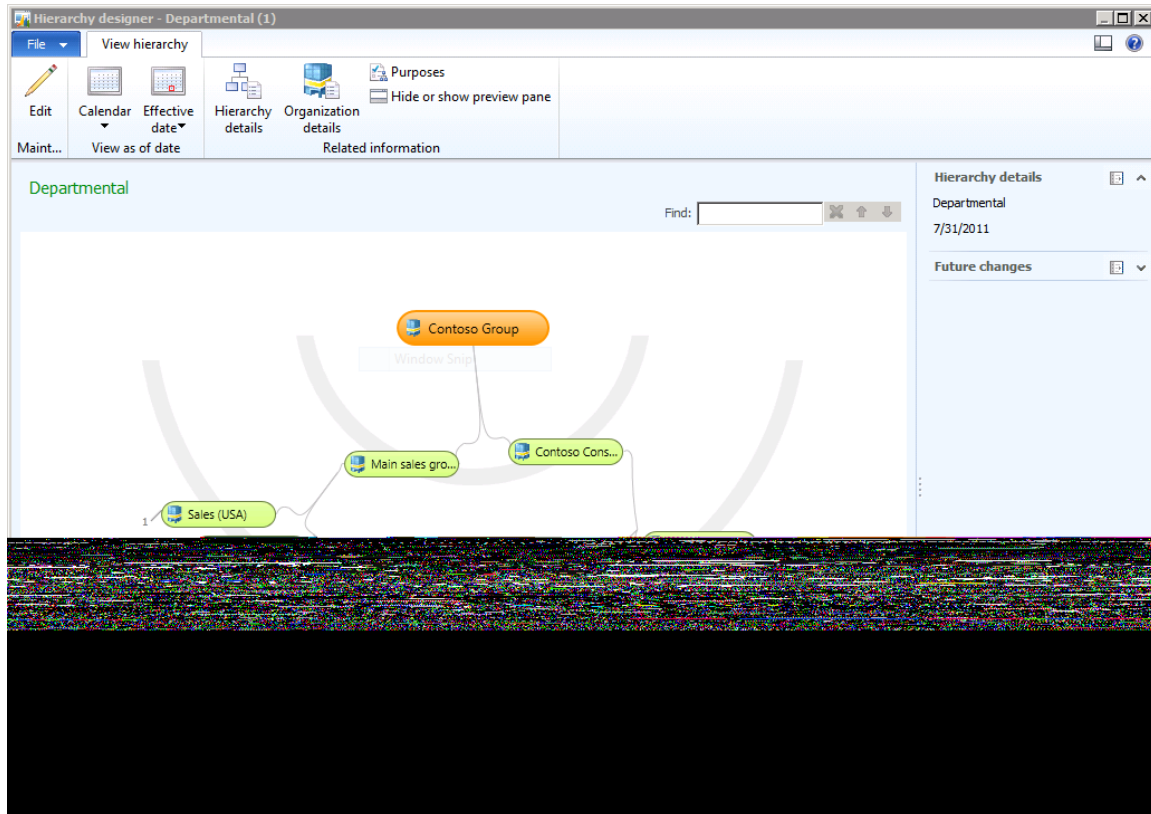


Figure 2: Enter a New Employee and Assign a Position in Dynamics AX



**Figure 3: Sample Organizational Hierarchy in Dynamics AX**

5. **Multi-company Settings:** Organizations with multiple companies or divisions can share information that is normally similar or the same across companies. For example, Lbrands (formerly known as Limited Brands), the parent company of Victoria’s Secret, Bath & Body Works, PINK, La Souza, and Henri Bendel New York. Instead of having to configure settings multiple times, the data can be shared across companies. Multi-company settings can include currencies and exchange rates, fiscal calendars, chart of accounts, and financial dimensions.
6. **Basic Data Setup:** Includes number sequence settings, license configuration, system parameters, and groups.
7. **Users:** Users can not only be entered manually, but also can be imported from Active Directory.
8. **Import and Export:** Data can be imported and exported from multiple sources.

**Course Assessment**

Prior to any discussion about ERPs or Dynamics AX, it is a good idea to have students participate in a pre-test. This will enable instructors to assess students’ knowledge of ERP. The same survey (see appendix 2) can be used for both the pre-and post-test. To allow for student anonymity and ease of tallying results, the survey can be created in a course management system, which will be discussed in the next section.

Following lectures, in-class demonstrations, and exercises, assignments and quizzes could be given to assess the mastery of concepts throughout the course. The sample assignment (see figure 4) and sample quiz are both based on the Introduction to Microsoft Dynamics AX 2012 materials. See appendix 3 for a sample assignment, sample quiz, and solution files. Other forms of assessment include a midterm exam, final exam, and case study analysis and presentation. The final exam could be replaced by a final project in Dynamics AX.

**Lab 1 Assignment**

Login to Microsoft Dynamics AX 2012. Answer the following questions and perform the following tasks by navigating through the ERP system. To submit for a grade, open Microsoft Word, and then login to our Blackboard course site. Follow the instructions within each exercise. Upload your Word document to Blackboard upon completion.

**Scenario:** You will be out of the office tomorrow for a one-day seminar. You are responsible for maintaining customer relationships. You have asked Betty to retrieve some information regarding a customer inquiry.

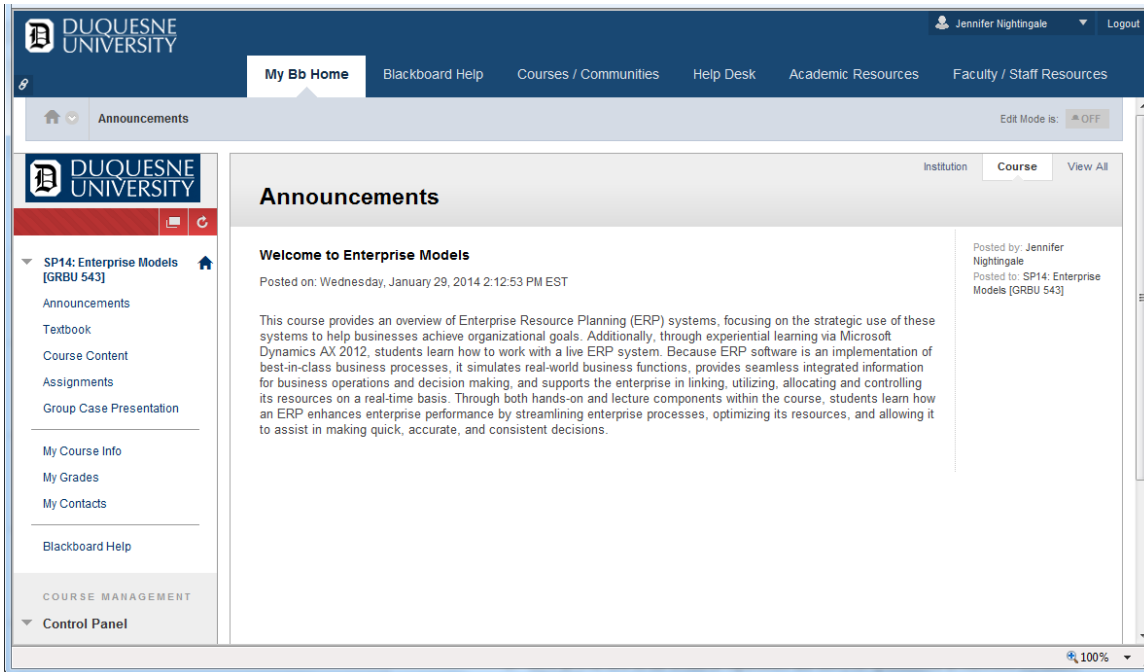
1. Find the customer account for the customer assigned to you by your professor. Please list the customer name and account number. \_\_\_\_\_
2. What is the primary address? \_\_\_\_\_
3. Is there a shipping address? \_\_\_\_\_
4. If so, what is the shipping address? \_\_\_\_\_
5. What is the average invoice amount? \_\_\_\_\_
6. What is the date of the last payment? \_\_\_\_\_
7. What is the outstanding balance on the account? \_\_\_\_\_
8. How many open transactions are on the account? \_\_\_\_\_
9. Is the account past due? \_\_\_\_\_
10. View the full transaction history. How many transactions were generated by this customer? \_\_\_\_\_

When finished, click and hold Shift + PrtScn to take a screen shot of the customer's record. Release the keys. Click "Paste" below this paragraph.

**Figure 4: Sample Lab Assignment**

## Course Management

Assignments and quizzes can be created in a course management system (CMS) for ease of use and auto-grading options. The use of a CMS is highly encouraged. At Duquesne University, Blackboard is used to assist instructors in managing courses.



**Figure 5: Course Site Created in Blackboard**

**CONCLUSION**

In conclusion, integrating Dynamics AX into your ISM course or curriculum can be an extremely rewarding venture. It may seem like it will be an overwhelming task to undertake; however, Dynamics AX does not have to be integrated into every lecture. Begin with one or two objectives and integrate a couple lessons while you become comfortable with your course’s structure and the application. Microsoft has so many resources available that the process of integrating Dynamics AX into your course becomes much less of a challenge.

## APPENDIX 1

### Learning Goals

1. To understand the concept of systems integration and the role of ERP in systems integration.
2. To understand implementation through the use of the ERP development life cycle.
3. To understand issues related to people and organizational change.
4. To understand other enterprise-level applications, including supply chain management and customer resource management applications, which are often integrated with ERP systems.
5. To understand the impact of security, compliance, and laws surrounding ERP implementations.

### Specific Objectives

At the end of the course, the student will be able to:

1. Describe the concept of systems integration and the role of ERP in systems integration.
2. Explain implementation through the use of the ERP development life cycle.
3. Label other enterprise-level applications, including supply chain management and customer resource management applications, which are often integrated with ERP systems.
4. Describe the impact of security, compliance, and laws surrounding ERP implementations.
5. Give a broad understanding of the capabilities in Microsoft Dynamics AX 2012.
6. Give an overview of the technical capabilities and lifecycle optimization in Microsoft Dynamics AX 2012.
7. Discuss project structure, project planning and management, estimation, release management, change management, and global deployment with Microsoft Dynamics AX 2012.
8. Discuss the basics behind role based security, the considerations to be made when it comes to planning security for ERP implementation, and the tools that help simplify the process in Microsoft Dynamics AX 2012.
9. Give an overview of the workflow system in Microsoft Dynamics AX 2012.
10. Demonstrate the Microsoft Dynamics AX 2012 mobile apps first hand and understand the basics of their configuration.

### Resources

#### Required

1. Motiwalla, L.F. & Thompson, J. (2011). Enterprise systems for management, 2<sup>nd</sup> edition. Boston, MA: Prentice Hall.
2. Microsoft Corporation (2014). Introduction to Microsoft Dynamics AX 2012. Retrieved from <https://mbs.microsoft.com/customersource/northamerica/AX/learning/student-training-materials/course80300>
3. ERP Software: Microsoft Dynamics AX 2012 R2.

#### Recommended

1. Dynamics Academic Alliance (DynAA) website:  
<http://www.microsoft.com/education/ww/leadership/Pages/dynamics-academic-alliance.aspx>
1. Gupta, A.K. (2008). Quality assurance for Dynamics AX-based ERP system: Verifying Dynamics AX customization to the Microsoft IBI standards. Birmingham, UK: Packt Publishing.



2. Luszczak, A. (2013). Using Microsoft Dynamics AX 2012: Updated for version R2. Berlin, DE: Springer Vieweg.
3. Microsoft Dynamics CustomerSource website: Primary support site and hosts extensive training resources (<http://www.customersource.com>).
4. Microsoft Dynamics InformationSource website: Solution architecture site that provides tools and content to support consistent implementations (<http://informationsource.dynamics.com/rfpservicesonline/RfpServicesOnline.aspx>).
5. Microsoft Dynamics Resource Library website: Download white papers and fact sheets, and watch videos to learn more about Microsoft Dynamics solutions solutions (<https://www.microsoft.com/en-us/dynamics/resource-library.aspx?SortField1=Microsoft%20Dynamics%20AX>).
6. Microsoft Dynamics YouTube channel: <http://www.youtube.com/user/msdyncomm?feature=watch>
7. Microsoft E-Learning Offline Player and materials: Access to Microsoft e-learning materials on <https://dynamics.microsoftelearning.com>.
8. Microsoft TechNet library website: Application user and system administrator online documentation (<http://aka.ms/AXTechNet>).
9. Monk, E. & Wagner, B. (2008). Concepts in enterprise resource planning, 3<sup>rd</sup> edition. Independence, KY: Cengage Learning.
10. Pocius, M. (2012). Microsoft Dynamics AX 2012 development cookbook. Birmingham, UK: Packt Publishing.

## APPENDIX 2

### Course Pre-Test

This is a pre-test that will assess how much you know about ERP. There are no right or wrong answers. Please answer the following 14 questions to the best of your ability. Thank you!

1. **A database is considered to be one of the key components of an ERP system.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
2. **If an ERP adoption supports the organization's business vision, there will be greater success in implementing the software.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
3. **ERP users with different age have different levels of satisfaction with the ERP system.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
4. **The benefits of adopting an ERP system differ depending on managerial decision levels.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
5. **The benefits of adopting the ERP system is positively related to the performance of internal processes.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
6. **Implementing an ERP successfully will greatly reduce costs in the organization.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
7. **ERP users with different levels of educational background have different levels of satisfaction with an ERP system.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
8. **ERP users with different work experience in the use of IT have different levels of satisfaction with an ERP system.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
9. **It is generally easier for an organization to modify the ERP software to fit their existing business processes.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A

10. **ERP systems grew primarily out of MRP and MRP II.**

Strongly agree    Agree    Neither Agree nor Disagree    Disagree    Strongly disagree    N/A

11. **One roadblock for ERP systems is that they require a substantial investment in order to be successful.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
12. **The goal of an ERP system is to integrate data and support all the major functions across the organization.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
13. **No single information system can support all the needs of a business.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A
14. **A goal of ERP systems is to make information flow be both dynamic and immediate.**  
Strongly agree   Agree   Neither Agree nor Disagree   Disagree   Strongly disagree   N/A

## APPENDIX 3

### Lab 1 Assignment

Login to Microsoft Dynamics AX 2012. Answer the following questions and perform the following tasks by navigating through the ERP system. To submit for a grade, open Microsoft Word, and then login to our Blackboard course site. Follow the instructions within each exercise. Upload your Word document to Blackboard upon completion.

**Scenario:** You will be out of the office tomorrow for a one-day seminar. You are responsible for maintaining customer relationships. You have asked Betty to retrieve some information regarding a customer inquiry.

1. Find the customer account for the customer assigned to you by your professor. Please list the customer name and account number. \_\_\_\_\_
2. What is the primary address? \_\_\_\_\_
3. Is there a shipping address? \_\_\_\_\_
4. If so, what is the shipping address? \_\_\_\_\_
5. What is the average invoice amount? \_\_\_\_\_
6. What is the date of the last payment? \_\_\_\_\_
7. What is the outstanding balance on the account? \_\_\_\_\_
8. How many open transactions are on the account? \_\_\_\_\_
9. Is the account past due? \_\_\_\_\_
10. View the full transaction history. How many transactions were generated by this customer? \_\_\_\_\_

When finished, click and hold Shift + PrtScn to take a screen shot of the customer's record. Release the keys. Click "Paste" below this paragraph.

**Scenario:** Jacqueline is responsible for purchasing. Contoso Entertainment uses the Master Planning module so she rarely has to manually create purchase orders. However, there is an urgent special order so she needs to create a purchase order immediately using the following details.

1. Vendor: 1201 Wingtip Toys Electronics
2. Item: 1000 LCD Television HD Black 42 Inch

- 3. Quantity: 100
- 4. Unit Price: \$200.00
- 1. Discount: 5%

There are several fields displayed on the purchase order form that Jacqueline is not worried about at this point. Hide the following fields from the form: Budget check results and Procurement category.

When finished, click and hold Shift + PrtScn to take a screen shot of the customer's record. Release the keys. Click "Paste" below this paragraph.

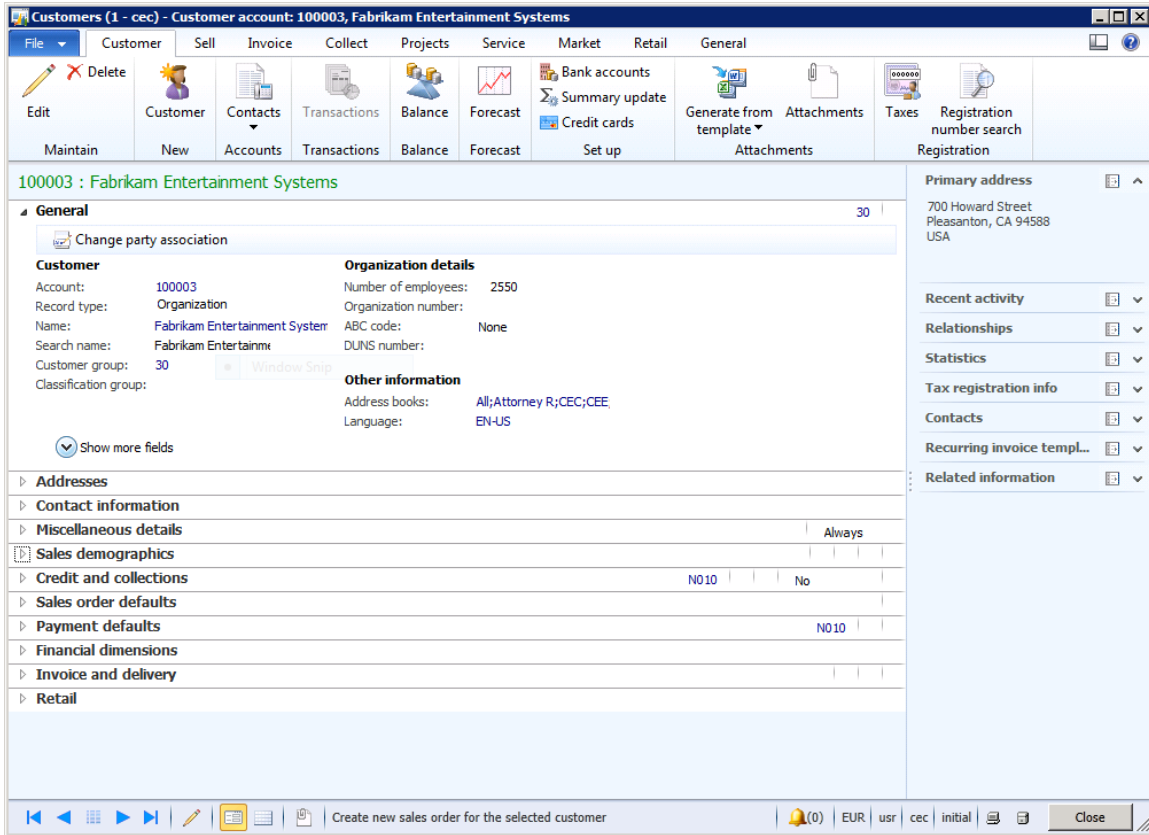
## Lab 1 Assignment Solution

Login to Microsoft Dynamics AX 2012. Answer the following questions and perform the following tasks by navigating through the ERP system. To submit for a grade, open Microsoft Word, and then login to our Blackboard course site. Follow the instructions within each exercise. Upload your Word document to Blackboard upon completion.

**Scenario:** You will be out of the office tomorrow for a one-day seminar. You are responsible for maintaining customer relationships. You have asked Betty to retrieve some information regarding a customer inquiry.

1. Find the customer account for the customer assigned to you by your professor. Please list the customer name and account number. Fabrikam Entertainment Systems 100003
2. What is the primary address? 700 Howard Street, Pleasanton, CA 94588 USA
3. Is there a shipping address? Yes
4. If so, what is the shipping address? 701 Howard Street, Pleasanton, CA 94588 USA
5. What is the average invoice amount? \$0.00
6. What is the date of the last payment? N/A
7. What is the outstanding balance on the account? \$0.00
8. How many open transactions are on the account? 0
9. Is the account past due? No
10. View the full transaction history. How many transactions were generated by this customer? 0

When finished, click and hold Shift + PrtScn to take a screen shot of the customer's record. Release the keys. Click "Paste" below this paragraph.



**Scenario:** Jacqueline is responsible for purchasing. Contoso Entertainment uses the Master Planning module so she rarely has to manually create purchase orders. However, there is an urgent special order so she needs to create a purchase order immediately using the following details.

11. Vendor: 1201 Wingtip Toys Electronics
12. Item: 1000 LCD Television HD Black 42 Inch
13. Quantity: 100
14. Unit Price: \$200.00
15. Discount: 5%

There are several fields displayed on the purchase order form that Jacqueline is not worried about at this point. Hide the following fields from the form: Budget check results and Procurement category.

When finished, click and hold Shift + PrtScn to take a screen shot of the customer’s record. Release the keys. Click “Paste” below this paragraph.



**Purchase order (1 - ceu) - Purchase order: 000487, Wingtip Toys Electronics**

**Purchase order header**

**Delivery**  
 Delivery date: 3/5/2014  
 Earliest confirmed delivery:

**Vendor**  
 Vendor account: 1201  
 Invoice account: 1201  
 Contact: Stuart Munson

**Retail**  
 Replenishment: \_\_\_\_\_  
 Service category: \_\_\_\_\_  
 Locations: 29  
 Cross docking dates:  
 Delivery date: 3/5/2014  
 Cross docking date: \_\_\_\_\_  
 Local delivery date: \_\_\_\_\_  
 Sales date: \_\_\_\_\_

**Purchase order lines**

Type	Budget check results	Line number	Item number	Product name	Procurement category	Variant number	Configuration	Size
		10	1000	LCD Television HD Black 42 inches				

**Latest purchase orders**

Purchase order	Status	Create
000487	Open order	2/
000479	Open order	11/2
000466	Open order	9/1
000350	Open order	6/
000336	Invoiced	5/

**Totals**

Net lines:	19,000.00
Cash discount:	1,000.00
Sales tax:	0.00
Charges:	0.00
Vendor total:	19,000.00
Currency:	USD
Use tax:	0.00
Other charges:	0.00
Document totals:	19,000.00

**Encumbrance summary**

USD | usr | ceu | initial | Close

## System Administration Quiz

**Multiple choice:** Please select the best answer from those provided.

1. Which of these are operating units available out of the box? (Select all that apply)
  1. Legal entity
  2. Department
  3. Value stream
  4. Cost center
  
2. \_\_\_\_\_ represent the relationships between the organizations that comprise your business.
  1. Organizational hierarchies
  2. Legal entities
  3. Operating unit types
  4. Number of sequences
  
3. \_\_\_\_\_ are used to enable smaller pieces of functionality.
  1. Configuration keys
  2. Legal entities
  3. Operating unit types
  4. Number of sequences
  
4. \_\_\_\_\_ can enter into contracts and are required to prepare statements that report on their performance.
  1. Configuration keys
  2. Legal entities
  3. Operating unit types
  4. Number of sequences

**Matching:** Where would you expect to find each of the following configurations?

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. I want to specify the format that is used for customer numbers</li> <li>2. I want to make sure the whole company rejects duplicate general ledger voucher numbers.</li> <li>3. I want to specify the default vendor tax group for domestic vendors.</li> <li>4. I want to allow all salespeople to reserve stock that is still on order and has not yet been received from a vendor.</li> <li>5. I want every customer record to have a tax group specified.</li> <li>6. I want everyone in the company to specify start and end times on their timesheet.</li> <li>7. I want to set the company wide mileage reimbursement amount.</li> <li>8. I want to number fixed assets by fixed asset group.</li> </ol> | <ol style="list-style-type: none"> <li>1. Inventory and warehouse management &gt; Setup &gt; Inventory and warehouse management parameters &gt; General</li> <li>2. Fixed assets &gt; Setup &gt; Fixed asset groups</li> <li>3. Project management and accounting &gt; Setup &gt; Project management and accounting parameters</li> <li>4. Accounts receivable &gt; Setup &gt; Accounts receivable parameters &gt; Number sequences</li> <li>5. Accounts receivable &gt; Setup &gt; Accounts receivable parameters &gt; General</li> <li>6. Accounts payable &gt; Setup &gt; Vendors &gt; Vendor groups</li> <li>7. Travel and expense &gt; Setup &gt; Travel and expense parameters</li> <li>8. General ledger &gt; Setup &gt; General ledger parameters</li> </ol> |
|--|--|

## System Administration Quiz Solution

**Multiple choice:** Please select the best answer from those provided.

1. Which of these are operating units available out of the box? (Select all that apply)
  1. **Legal entity**
  2. **Department**
  3. **Value stream**
  4. **Cost center**
  
2. \_\_\_\_\_ represent the relationships between the organizations that comprise your business.
  1. **Organizational hierarchies**
  2. Legal entities
  3. Operating unit types
  4. Number of sequences
  
3. \_\_\_\_\_ are used to enable smaller pieces of functionality.
  1. Legal entities
  2. Operating unit types
  3. Number of sequences
  4. **Configuration keys**
  
4. \_\_\_\_\_ can enter into contracts and are required to prepare statements that report on their performance.
  1. Configuration keys
  2. **Legal entities**
  3. Operating unit types
  4. Number of sequences

**Matching:** Where would you expect to find each of the following configurations?

- |  |   |
|--|---|
| 1. I want to specify the format that is used for customer numbers                          | 4. I want to allow all salespeople to reserve stock that is still on order and has not yet been received from a vendor. |
| 2. I want to make sure the whole company rejects duplicate general ledger voucher numbers. | 5. I want every customer record to have a tax group specified.  |
| 3. I want to specify the default vendor tax group for domestic vendors.                    |   |

- |   |  |
|---|--|
| <p>6. I want everyone in the company to specify start and end times on their timesheet.</p> <p>7. I want to set the company wide mileage reimbursement amount.</p> <p>8. I want to number fixed assets by fixed asset group.</p> <p>1. Inventory and warehouse management &gt; Setup &gt; Inventory and warehouse management parameters &gt; General</p> <p>2. Fixed assets &gt; Setup &gt; Fixed asset groups</p> <p>3. Project management and accounting &gt; Setup &gt; Project management and accounting parameters</p> | <p>4. Accounts receivable &gt; Setup &gt; Accounts receivable parameters &gt; Number sequences</p> <p>5. Accounts receivable &gt; Setup &gt; Accounts receivable parameters &gt; General</p> <p>6. Accounts payable &gt; Setup &gt; Vendors &gt; Vendor groups</p> <p>7. Travel and expense &gt; Setup &gt; Travel and expense parameters</p> <p>8. General ledger &gt; Setup &gt; General ledger parameters</p> |
|---|--|

Answers: D, H, F, A, E, C, G, B

## **REFERENCES**

- Microsoft Corporation (2014). Introduction to Microsoft Dynamics AX 2012. Retrieved February 13, 2014 from <https://mbs.microsoft.com/customersource/northamerica/AX/learning/student-training-materials/course80300>
- Monk, E. & Wagner, B. (2008). Concepts in enterprise resource planning, 3rd edition. Independence, KY: Cengage Learning.
- Motiwalla, L.F. & Thompson, J. (2011). Enterprise Systems for Management, 2<sup>nd</sup> edition. Boston, MA: Prentice Hall.