

BUSINESS TRANSFER ASSURANCE GUIDE (TAG)

July 7, 2010

Ohio Transfer Module:		
Ohio Transfer Module (OTM) Requirements: 36-40 semester hours / 54-60 quarter hours. Students should select courses within the OTM that complement the selected major and meet any specific general education requirements. Students are encouraged to complete the OTM to ensure maximum transferability and application of credits.		
<u>Required Disciplines</u>	<u>Minimum Required Hours</u>	<u>Recommended Courses</u>
Area I. English Composition Area II. Mathematics Area III. Arts & Humanities Area IV. Social Sciences Area V. Natural & Physical Science	3 sem. / 5-6 qtr. 3 sem. / 3 qtr. 6 sem. / 9 qtr. 6 sem. / 9 qtr. 6 sem. / 9 qtr.	<u>Courses below are required of all business majors</u> Business Calculus or Calculus I Microeconomics(Prerequisite) & Macroeconomics
Additional courses beyond the minimum required hours, from any of the disciplines listed above, will count toward the completion of the OTM (36-40 semester hours or 54-60 quarter hours). The courses listed as part of the OTM are required of all Business majors seeking transfer into a baccalaureate program. Any or all of the classes so noted may be required in order to be admitted into the program.		
Major Courses – Hours/courses listed below that count toward the major or pre-major requirements.		
a. Introduction to Financial Accounting – OBU001	Credits: 3 semester hours / 5 quarter hours	
Advising Notes:		
b. Introduction to Managerial Accounting – OBU002	Credits: 3 semester hours / 5 quarter hours	
Advising Notes:		
c. Legal Environment of Business – OBU004	Credits: 3 semester hours / 4 quarter hours	
Advising Notes:		
d. Business Communications – OBU005	Credits: 3 semester hours / 4 quarter hours	
Advising Notes:		
e. Principles of Marketing Management – OBU006	Credits: 3 semester hours / 4 quarter hours	
Advising Notes: Prerequisite of one course emphasizing microeconomics		
f. Business Statistics – OBU009	Credits: 5-6 semester hours / 8-9 quarter hours	
Advising Notes:		
Transfer Assurance Guides Total Guaranteed Credits (Range)		
• Ohio Transfer Module	36 – 40 sem.	54 – 60 qtr.
• Pre-major / Major	0 – 20 to 21 sem.	0 – 30 to 31 qtr.

Institutional Requirements: For entrance and graduation, a transfer student must meet all institutional requirements which would include, but may not be limited to: minimum grade point average, residency requirements, upper division credits attained, minimum grades in specific courses, performance requirements (ex. dance, music) and other requirements of native students from the same institution

OBU001 - INTRODUCTORY FINANCIAL ACCOUNTING
3 Semester Hours/5 Quarter Hours

Related TAGs: Business

General Course Description

This is a course of study that introduces financial accounting and financial reporting for business entities.

Summary of Learning Outcomes and Academic Skills: Any introductory course of study in financial accounting that is included in the Business Transfer Module must use business-related materials to develop the following general learning outcomes and academic skills:

1. Understand the broad role that accounting information plays in the economy.
2. Understand of basic financial statements their nature, purposes and use by business decision makers.
3. Ability to use the language of accounting and apply the important concepts on which financial reporting is based.
4. Appreciation of general business concepts and processes
5. Ability to analyze the impact of basic business transactions on the financial statements of a business corporation.
6. Ability to construct basic financial statements for a simple corporate business entity.
7. Ability to evaluate the financial performance of a simple corporation on the basis of its financial statements.

Summary of Body of Knowledge Requirements: Any introductory course of study in financial accounting that is included in the Business Transfer Module must provide coverage of *at least seventy percent* of the following topics:

I. The Environment of Accounting

1.00 The Role of Accounting in Society

- 1.01 Financial Information and Resource Allocation
- 1.02 Accounting and the Corporation
- 1.03 Auditing and Credibility in Reporting
- 1.04 Structure of the Accounting Profession
- 1.05 Ethics, Reputation, and Legal Liability in Accounting
- 1.06 Types of Business Organizations

2.00 Accounting Standards and Regulation Structures

2.01 Financial Statements and Generally Accepted Accounting Principles *

2.02 The FASB and Financial Accounting Standards

2.03 Government Oversight of Accounting and Auditing

II. The Accounting Model

3.00 The Basic *Corporate* Financial Statements

3.01 Income Statement and Balance Sheet for Corporation*

3.02 Statement of Equity and Retained Earnings Balances *

3.03 Cash Flow Statement *

3.04 Other Elements of the Corporate Annual Report

4.00 Analysis of Business Activity

4.01 The basic accounting model (“balance sheet equation”) *

4.02 Income measurement and accrual accounting *

4.03 Impact of simple transactions on “balance sheet equation” *

4.04 Debits and credits

4.05 Accounting records (journal, ledgers, computer systems)

5.00 Preparation of Corporate Financial Statements

5.01 The accounting cycle (trial balances, adjustments)

5.02 Income statement and balance sheet

5.03 Statement of equity and retained earnings

5.04 Cash flow statement

III. Accounting for Key Domains of Business Activity

6.00 Revenues and Receivables

- 6.01 Accounting for service and merchandise revenues
- 6.02 Reporting customer receivables-allowances and write-offs

7.00 Merchandising and Inventory

- 7.01 Accounting for the cost of purchases and sales of merchandise ***
- 7.02 Inventory records (perpetual, periodic)
- 7.04 Inventory accounting methods (FIFO, LIFO, etc) ***
- 7.05 Lower of cost or market valuation

8.00 Working Capital

- 8.01 Classification of current assets and current liabilities ***
- 8.02 Management of working capital
- 8.03 Measures of working capital use (current ratio, etc.)
- 8.04 Internal control of cash

9.00 Long-Lived Assets

- 9.01 Acquisition cost ***
- 9.02 Depreciation accounting and depreciation methods ***
- 9.03 Accounting for disposition of assets
- 9.04 Intangible assets

10.00 Long-term Debt Financing

- 10.01 The nature of liabilities ***
- 10.02 Types of long-term liabilities (long-term debt, deferred tax liabilities, pension and post-retirement benefit liabilities, contingent liabilities, leases, etc.)
- 10.03 Effective interest method (present value analysis) and accounting for long-term liabilities ***

11.00 Equity Financing

11.01 Debt vs. equity

11.02 Types of equity (preferred, common, treasury)

11.03 Accounting for stock (issuance, dividends) *

11.04 Book value vs. market value *

IV. Using Financial Statements

12.00 Analysis of Financial Statements

12.01 Objectives of financial statement analysis

12.02 Sources of company information

12.03 Financial ratios *

12.04 Earnings per share *

13.00 The Annual Report

13.01 Accounting elements of annual report

13.02 Management elements of annual report

13.03 SEC reporting requirements

14.00 Intercorporate Investments

14.01 Accounting for long-term investments

14.02 Consolidated financial statements

14.03 Purchased goodwill

Note: Topics marked with an asterisk (*) are considered fundamental and essential.

OBU002 - INTRODUCTORY MANAGERIAL ACCOUNTING
3 Semester Hours/5 Quarter Hours

Related TAGs: Business

General Course Description

This is a course of study that introduces managerial accounting for business entities.

Summary of Learning Outcomes and Academic Skills: Any introductory course of study in managerial accounting that is included in the Business Transfer Module must use business-related materials to develop the following general learning outcomes and academic skills:

1. Understand the differing information needs of internal management and external users of financial information.
2. Appreciate the role of managerial accounting in management contexts of planning, control, decision making, and performance evaluation.
3. Understand basic managerial accounting terminology and concepts.
4. Apply basic managerial accounting concepts to problems of management planning, control, decision making, and performance evaluation.
5. Appreciate the relevance of other disciplines to the process of providing information for management planning, control, decision making, and performance evaluation.

Summary of Body of Knowledge Requirements: Any introductory course of study in managerial accounting that is included in the Business Transfer Module must provide coverage of *at least seventy percent* of the following topics:

I. Overview of Managerial Accounting

1.00 Managerial Accounting and Business Organizations

- 1.01 Serving information needs of business management
- 1.02 Supplying information for external financial reports
- 1.03 Cost-benefit analysis for accounting systems
- 1.04 Ethics and integrity
- 1.05 CFOs, controllers, treasurers, and internal auditors

II. Cost Measurement and Decisions

2.00 Cost Concepts

- 2.01 Activities, costs and cost drivers ***
- 2.02 Variable, fixed and mixed costs ***
- 2.03 Direct and indirect costs ***
- 2.04 Costs functions and cost behavior ***

3.00 Cost-Volume-Profit Analysis

- 3.01 Cost-volume-profit graphs ***
- 3.02 Contribution margin and contribution margin ratio ***
- 3.03 Applications of cost-volume-profit analysis
- 3.04 Sales mix analysis

4.00 Measurement of Cost Behavior

- 4.01 Cost functions
- 4.02 Methods of measuring cost functions
- 4.03 Cost and the value chain

5.00 Cost Accounting Systems

- 5.01 Cost accumulation and cost assignment ***
- 5.02 Categories of manufacturing cost ***
- 5.03 Product and period costs ***
- 5.04 Activity-based costing (ABC) systems ***

6.00 Cost and Marketing Decisions

- 6.01 Relevant and irrelevant costs in decision contexts ***

- 6.02 Special order decisions
- 6.03 Adding and dropping products
- 6.04 Using limited resources
- 6.05 Cost-plus pricing and target costing

7.00 Cost and Production Decisions

- 7.01 Opportunity, outlay, and differential cost ***
- 7.02 Make or buy decisions
- 7.03 Processing joint products
- 7.04 Influence of performance measures on production decisions

8.00 Capital Investment Decisions

- 8.01 Discounted cash flow analysis ***
- 8.02 Evaluation of individual projects—payback, return on investment, and net present value ***
- 8.03 Comparison of alternative projects ***
- 8.04 Equipment replacement decisions
- 8.05 Income taxes and cash flow analysis

III. Planning and Control

9.00 Budgeting

- 9.01 Preparation of the master/operational budget ***
- 9.02 Budgets and organizational behavior
- 9.03 Financial planning models

10.00 Flexible Budgets and Variance Analysis

- 10.01 Static and flexible budgets ***
- 10.02 Standard costs and prime cost variance analysis ***

10.03 Standard costs and overhead variance analysis

11.00 Management Control

11.01 Centralized vs. decentralized organizations

11.02 Responsibility accounting—cost centers, revenue centers, profit centers, investment centers

11.03 Goal congruence, managerial effort and motivation

11.04 Performance measurement—residual income and return on investment

11.05 Non-financial measures of performance and the balanced scorecard

11.06 Transfer prices

IV. Product Costing

12.00 Cost Allocation

12.01 Cost objects and allocations *

12.02 Allocation of service department costs

12.03 Allocation of joint costs

12.04 Allocation of corporate support costs

12.05 Strengths and weaknesses of allocations in decision contexts

13.00 Accounting for Overhead Costs

13.01 Overhead rates *

13.02 Accounting for manufacturing overhead *

13.03 Variable vs. absorption costing

13.04 Overhead variance analysis

14.00 Job Costing and Process Costing Systems

14.01 Manufacturing inventories

14.02 Distinction between job-order and process systems

14.03 Job costing and accounting for manufacturing costs *

14.04 Basics of Process Costing

Note: Topics marked with an asterisk () are considered fundamental and essential.*

OBU004 – Legal Environment of Business
3 Semester Hours/4 Quarter Hours

Related TAGs: Business

General Course Description

This is a course of study in the legal environment in which businesses operate.

Summary of Learning Outcomes and Academic Skills: Any legal environment of business course included in the Business Transfer Module must use business-related cases and materials to develop all of the following:

All nine learning outcomes learning outcomes listed below must be addressed.

1. Familiarity with legal language & concepts as they relate to business
2. Demonstrate an understanding of ethical behavior and social responsibility in the global environment in which business operates
3. General understanding of the legal system in the United States as it relates to business
4. Understanding of the basic law of contracts, torts and property as it relates to business
5. Understanding of the regulatory environment in which businesses operate
6. Ability to apply regulatory provisions to business situations
7. Ability to comprehend basic legal reasoning
8. Awareness of basic strategies for avoiding & addressing legal problems in business
9. Apply critical thinking to the legal implications present in business activities

Summary of Body of Knowledge Requirements: Any business law course included in the Business Transfer Module must provide coverage of at least seventy percent of the following business law topics:

I. Business and the Legal System

1.00 Business ethics and social responsibility *

2.00 The nature of law and sources of law in the United States*

3.00 The judicial system of the United States*

II. Civil Foundations of Legal Environment of Business

4.00 The basic torts relating to business enterprises*

5.00 Different types of contracts and the requirements for a binding, legal agreement.*

6.00 The importance of property in the legal environment of business*

III. The Regulatory Environment of Business in the United States (Cover at least five of the nine topics listed under category III.)

7.00 Legal Procedure

8.00 Product Liability and Advertising

9.00 Debtor—Creditor Relationships

10.00 Agency, Partnerships and Corporations

11.00 Employment Relationship and Equal Employment

12.00 Environmental Law

13.00 Anti-trust Law

14.0 Securities Regulation

15.0 Administrative Law

Note: Topics marked with an asterisk (*) are considered essential and must be taught as part of the TAG.

OBU005 – BUSINESS COMMUNICATION
3 Semester Hours/4 Quarter Hours

Related TAGs: Business

General Course Description

A course to introduce basic business communication principles and establish written communication standards in preparation for the real-world workplace. Students will learn to analyze different writing situations, how to plan and design communications, and how to write in an appropriate style. Effective oral communication utilizing appropriate technology, strategy, and skill will be discussed and developed.

Summary of Learning Outcomes and Academic Skills:

- 1. Select and utilize appropriate formats for professional writing***
- 2. Plan, edit, and revise written work consistent with professional standards***
3. Write executive summaries
- 4. Design and present oral communication skills***
5. Select and use appropriate graphic aids
- 6. Utilize computer resources to achieve communication objectives***
- 7. Write various business correspondences, including internal and external to the business organization***
8. Conduct and report business research
9. Develop correspondence appropriate to the job search

Note: Topics marked with an asterisk () are considered essential and must be taught as part of the TAG.*

OBU006 - PRINCIPLES OF MARKETING MANAGEMENT

3 Semester Hours/4 Quarter Hours

Prerequisite/Co-requisite: Economics, one course emphasizing micro economics.

Related TAGs: Business

General Course Description

Marketing activities, analysis, strategies, and decision making in the context of other business functions. Topics include: integration of product, price, promotion, and distribution activities; research and analysis of markets, environments, competition, and customers; market segmentation and selection of target markets; and emphasis on behavior and perspectives of consumers and organizational customers. Planning and decision making for products and services in profit and nonprofit, domestic and global settings.

Outcomes marked with an asterisk are essential and must be taught.

Summary of Learning Outcomes and Academic Skills

Students who successfully complete Marketing Management are expected to demonstrate all of the following:

- 1. Working knowledge and application of marketing terminology, concepts, activities, and strategies;***
- 2. Understanding of marketing functions within the organization and external environments and marketing contributions organizational attainment of goals and objectives;***
- 3. Quantitative and qualitative analytical skills through application of marketing concepts, theories and tools to setting strategies and solving marketing problems; and ***
- 4. Skills in creative and critical thinking, written and oral communication, and ethical reasoning;***

Course Content

The Marketing Management course covers the following topics:

Customer-driven marketing concept and activities*

Strategic planning

Analysis of external environments*

Competitive

Economic

Political/Legal

Social/Cultural

Diversity in demographic and cultural

Technological

Marketing in domestic and global settings*

Ethical reasoning and social responsibility*

Marketing analysis, segmentation, selection of target markets, and positioning*

Marketing research*

Research of markets, competition, and customers

Information systems and decision support

Consumer and organizational buying behavior*

Differences between consumer and organizational markets

Customer relationship management

Management of product and service offerings*

Characteristics of products and service

Product development and management

Branding

Packaging

Management of distribution and marketing channels*

Retailing*

Roles of wholesalers and distributors

Supply chain management

Physical distribution and logistics

Direct and electronic channels

Management of integrated marketing communications*

Advertising

Sales Promotion

Direct marketing

Electronic communications and commerce

Personal selling and sales management

Management of pricing decisions*

Competitive and economic factors

Psychological factors
Cost and profit perspectives

Note: Topics marked with an asterisk () are considered essential and must be taught as part of the TAG.*

OBU009- BUSINESS STATISTICS

5-6 Semester Hours/8-9 Quarter Hours

Prerequisite: A college algebra or business algebra course that includes exponential and logarithmic functions. *Note: Some schools require business calculus or calculus as a prerequisite for business statistics. Transfer students are advised to check the specific prerequisites for business statistics at their destination school.*

Related TAGs: Business

Outcomes marked with an asterisk are essential and must be taught.

OBU009 may be met by a single course or by a sequence of courses covering the business statistics learning outcomes.

General Course Description:

This is a course of study that introduces statistical thinking and statistical methods to business students. The American Statistical Association has developed a set of six recommendations for the teaching of introductory statistics – these recommendations are known as the “Guidelines for Assessment and Instruction in Statistics Education.” The recommendations are as follows:

1. Emphasize statistical literacy and develop statistical thinking;
2. Use real data;
3. Stress conceptual understanding rather than mere knowledge of procedures;
4. Foster active learning in the classroom;
5. Use technology for developing conceptual understanding and analyzing data;
6. Use assessments to improve and evaluate student learning;

Using these recommendations as guiding principles, OBU009 should develop the more specific learning outcomes and skills summarized below:

Summary of Learning Outcomes and Academic Skills: Any introductory course of study in business statistics meeting the requirements for OBU009 must use business related materials to develop the following general learning outcomes and academic skills.

It is expected that courses will support the use of technology and technology should be fully integrated in the course, especially in graphical depictions and regression analysis:

1. Give an overview of various types of sampling and the importance of randomization.
2. Understand how to organize and summarize data by using descriptive statistics and appropriate statistical graphics.
3. Understand the concept of probability and its applications in a business context.
4. Understand discrete and continuous random variables and be able to use their distributions to compute probabilities.
5. Understand the concept of sampling distributions.
6. Understand how to estimate population parameters using point and interval estimates.
7. Use hypothesis testing as a tool for statistical decision making in a business context.
8. Use hypothesis testing to compare two populations within the business context.
9. Understand and be able to test the hypothesis of independence of two categorical variables.
10. Understand and interpret simple linear regression analysis and use it in business decision making.
11. Understand and apply multiple linear regression analysis in a business context.
12. Understand and apply Analysis of Variance in a business context.

To qualify for OBU009 (Business Statistics), a course must cover as a minimum the essential learning outcomes, noted by an asterisk. A course in Business Statistics may also commonly include some of the listed nonessential learning outcomes. These optional topics should be included only if there is adequate course time to do so beyond giving primary course attention to the essential learning outcomes. At least 70% of the classroom instructional time has to be spent on the essential learning outcomes. The optional learning outcomes are learning experiences that enhance, reinforce, enrich or are further applications of the essential learning outcomes. If review of prerequisite course content is necessary, only a minimal amount of time should be devoted to such review.

Summary of Body of Knowledge Requirements for OBU009: Any introductory course of study in business statistics meeting the requirements for OBU009 must provide coverage of the following learning outcomes.

Outcomes marked with an asterisk are essential and must be taught.

1. Give an overview of various types of sampling and the importance of randomization.

1.01 Understand selecting a simple random sample.*

1.02 Distinguish between observational and experimental studies.*

1.03 Understand basic principles of survey sampling*

2. Understand how to organize and summarize data by using descriptive statistics and appropriate statistical graphics.

2.01 Use graphical methods to display a distribution of a variable and show relationships between two variables.*

2.02 Compute and interpret measures of central tendency and spread (variation), e.g., mean, median, mode, range, variance, standard deviation, percentiles and quartiles.*

2.03 Describe the shape of a distribution. Understand and apply the Empirical Rule for symmetric data and applications.*

3. Understand the concept of probability and its applications in a business context.

3.01 Understand the concept of probability and the properties that probabilities must satisfy. Perform computations using the rules of probability; addition and multiplication rules.*

3.02 Use conditional probability to understand the association between two categorical variables in two-way cross-tabulation tables. Interpret statistical independence of two variables.*

3.03 Understand Bayes' Rule and use it to compute probabilities.

3.04 Understand the concept of statistical independence and use it to compute probabilities.*

4. Understand discrete and continuous random variables and be able to use their distributions to compute probabilities.

4.01 Understand discrete random variables and use their distributions to compute probabilities.*

4.02 Understand, compute, and interpret the expected value, variance, and standard deviation of a discrete random variable. In particular, discuss the binomial distribution and some of its business applications.*

4.03 Discuss Poisson, Geometric and Hypergeometric distributions and some of their business applications.

4.04 Understand the concept of a continuous random variable and density curve. Find probabilities and percentiles for uniform and normal densities. Use the normal probability distribution and some of its business applications such as control charts.*

4.05 Discuss exponential distributions and some of its business applications.

5. Understand the concept of sampling distributions.

5.01 Discuss sampling distributions for sample means and sample proportions. Use simulation to illustrate sampling distributions.*

5.02 Compute and interpret the mean and standard error of the sample mean and sample proportion.*

5.03 Use the Central Limit Theorem to understand the shape of a distribution and use it to compute probabilities.*

6. Understand how to estimate population parameters using point and interval estimates.

6.01 Compute point estimates of a population mean and population proportion and understand their properties.*

6.02 Understand the concept of a confidence interval for a population mean including its margin of error and level of confidence.*

6.03 Compute and interpret a confidence interval for a population mean (z -based and t -based intervals).*

6.04. Compute and interpret a z -based confidence interval for a population proportion.*

6.05 Be able to determine the sample size needed to give a specific margin of error and confidence level when estimating a population mean or proportion inference.*

7. Use hypothesis testing as a tool for statistical decision making in a business context.

7.01 Understand the concept and steps of performing a hypothesis test.*

7.02 Use both a critical value and p -value to test a hypothesis about a population mean and proportion.*

8. Use hypothesis testing to compare two populations within the business context.

8.01 Understand testing procedures for comparing two population means or two population proportions.*

8.02 Use independent samples and paired sample test procedures to compare two population means.*

9. Understand and be able to test the hypothesis of independence of two categorical variables.

9.01 Understand the Pearson test of independence and the Chi-Square sampling distribution.*

9.02 Interpret non-dependence in the contingency table when the hypothesis of independence is rejected.*

10. Understand and interpret simple linear regression analysis and use it in business decision making.

10.01 Use a scatter plot to assess the appropriateness of performing a simple linear regression. Understand the distributional assumptions of a linear regression model.*

10.02 Find and interpret the least squares estimates of the intercept and slope. Use the least squares line to make predictions.*

10.03 Find and interpret the correlation coefficient and the coefficient of determination. Understand the distinction between correlation and causation.*

10.04 Use inferential techniques to test the significance of the slope.*

10.05 Understand the residuals and use residual plots to test the assumptions of the model.*

10.06 Construct and interpret confidence intervals for the mean response and prediction intervals for future responses.

11. Understand and apply multiple linear regression analysis in a business context.

11.01 Understand the assumptions of a multiple linear regression model.*

11.02 Estimate and interpret the model parameters.*

11.03 Test the significance of model parameters and use a linear model to make predictions.*

11.04 Find and interpret the multiple coefficient of determination, R-squared, and adjusted R-squared.*

11.05 Construct and interpret confidence intervals for the mean response and prediction intervals for future responses.

12. Understand and apply Analysis of Variance in a business context.

12.01 Understand the assumptions of an ANOVA model.

12.02 Understand the F-procedure for testing the equality of population means in a one-way ANOVA.

12.03 In the case when the test is rejected, understand the use of multiple comparison methods.

13. Understand basic principles of statistical process control and interpreting control charts.

TMM013 – Business Calculus

5-6 Semester Hours/8-9 Quarter Hours

Prerequisite: A college algebra (TMM 001), business algebra or precalculus (TMM 002) course that includes polynomial, rational, exponential and logarithmic functions.

Related TAGs: Business

In a Business Calculus course, students should:

- develop mathematical thinking and communication skills and learn to apply precise, logical reasoning to problem solving.
- be able to communicate the breadth and interconnections of the mathematical sciences through being presented key ideas and concepts from a variety of perspectives, a broad range of examples and applications, connections to business and other subjects, and contemporary topics and their applications.
- experience geometric as well as algebraic viewpoints and approximate as well as exact solutions.
- use computer technology to support problem solving and to promote understanding, as most calculus students, especially those who may take only one semester, profit from the use of a graphing utility and a tool for numerical integration.

– Adapted from the MAA/CUPM 2004 Curriculum Guide

To qualify for TMM 013 (Business Calculus), a course must cover as a minimum the essential learning outcomes, noted by an asterisk. A course in Business Calculus may also commonly include some of the listed nonessential learning outcomes. These optional topics should be included only if there is adequate course time to do so beyond giving primary course attention to the essential learning outcomes. At least 70% of the classroom instructional time has to be spent on the essential learning outcomes. The optional learning outcomes are learning experiences that enhance, reinforce, enrich or are further applications of the essential learning outcomes. If review of prerequisite course content is necessary, only a minimal amount of time should be devoted to such review.

The successful Business Calculus student should be able to apply the following competencies to a wide range of functions, including piecewise, polynomial, rational, algebraic, exponential and logarithmic:

1. Demonstrate an understanding of limits and continuity.

1.01 Determine limits analytically, numerically and graphically including one-sided limits and limits at infinity.*

- 1.02 Analyze the limit behavior of a function at a point in its domain to determine if the function is continuous at that point. Determine intervals in which a function is continuous. Analyze and classify the discontinuities of a function.***
2. Demonstrate an understanding of derivatives and the ability to compute derivatives.
 - 2.01 Use the limit definition of the derivative to determine the existence and to find the derivative of a given function.***
 - 2.02 Find the derivative of a function by identifying and applying the appropriate derivative formula.***
 - 2.03 Find higher order derivatives.***
3. Understand the interpretation of derivatives and their applications in a business environment.
 - 3.01 Interpret the derivative as a rate of change.***
 - 3.02 Find the slope of the tangent line to the graph of a function at a given point.***
 - 3.03 Use the first derivative to determine intervals on which the graph of a function is increasing or decreasing and to determine critical points of the function.***
 - 3.04 Use the second derivative to determine intervals on which the graph of a function is concave upwards or concave downwards and to determine points of inflection.***
 - 3.05 Find and classify relative extrema and, on a closed interval, absolute extrema of a function.***
 - 3.06 Solve applied problems including marginal analysis applications.***
 - 3.07 Explain the relationship between marginal cost and average cost.***
 - 3.08 Determine and discuss the elasticity of demand for a product.
4. Understand the concept of integration and demonstrate ability to find indefinite and definite integrals apply those results to the business setting.
 - 4.01 Construct antiderivates analytically.***
 - 4.02 Find indefinite integrals using integration formulas and the method of substitution.***
 - 4.03 Find indefinite integrals using integration by parts.

- 4.04 Identify definite integrals of functions as the areas of regions between the graph of the function and the x-axis.***
- 4.05 Estimate the numerical value of a definite integral using a Riemann sum.
- 4.06 Understand and use the Fundamental Theorem of Calculus to evaluate definite integrals.***
- 4.07 Use definite integrals to calculate the area of the region under a curve and the area of the region between two curves.***
- 4.08 Determine present value and future value for an investment with interest compounded continuously.***
- 4.09 Determine the average value of a function on an interval.
- 4.10 For given supply and demand functions find and interpret the consumer's surplus and the producer's surplus.***

5. Demonstrate an understanding of functions of two variables

- 5.01 Find the domain of a function of two variables.
- 5.02 Interpret contour diagrams for functions of two variables.
- 5.03 Compute partial derivatives of functions of two variables algebraically.
- 5.04 Determine critical points for functions of two variables.
- 5.05 Use the second derivative test to determine the nature of critical points of a function of two variables.
- 5.06 Use the method of Lagrange multipliers to determine extreme values of functions of two variables subject to constraints.
- 5.07 Solve applied problems involving the Cobb-Douglas production functions.

OSS004 – PRINCIPLES OF MICROECONOMICS
3 Semester Hours/3-4 Quarter Hours

Related TAGs: Business, Economics, Geography

Outcomes marked with an asterisk are essential and must be taught.

1. Understand how economics is a social science that draws conclusions based on hypotheses, theories, and data in order to understand human behavior
2. **Understand basic microeconomics terms and concepts, including scarcity and choice, equilibrium, efficiency and equity, positive and normative economics, comparative advantage, and specialization.***
3. **Understand the fundamental economic question of allocating scarce resources***
4. **Comprehend the concepts of opportunity cost and the production possibility frontier***
5. **Comprehend supply and demand, the function of prices in markets, and how markets work and sometimes don't work, for example market failure and externalities***
6. **Comprehend the effects of government intervention in markets***
7. **Comprehend how consumers make choices ***
8. **Comprehend production theory***
9. **Comprehend the costs of production***
10. **Comprehend firm behavior in competitive markets***
11. **Comprehend firm behavior in imperfect markets***
12. Comprehend elasticity and its application
13. Comprehend how the markets for resources operate and the determination of wage rates, interest, and rent
14. Understand the determination of income distribution, including poverty and discrimination
15. Comprehend the determinants of international trade flows
16. Apply economic reasoning to better understand and critically evaluate real world circumstances and events

OSS005 - Principles of Macroeconomics
3 Semester Hours/3-4 Quarter Hours

Related TAGs: Business, Economics

Outcomes marked with an asterisk are essential and must be taught.

1. Understand how economics is a social science that draws conclusions based on hypotheses, theories, and data in order to understand human behavior
2. **Understand basic macroeconomic terminology and concepts, including the distinction between real and nominal magnitudes***
3. **Understand the national income accounts***
4. **Comprehend the nature of the business cycle***
5. **Comprehend the determinates of important macroeconomic variables, including the level of income, the level of employment, the unemployment rate, the natural rate of unemployment, the price level, the inflation rate, productivity and the rate of interest***
6. **Comprehend the supply and demand for money***
7. **Comprehend the Federal Reserve System***
8. **Comprehend the development of, and be able to apply aggregate demand and aggregate supply***
9. **Comprehend the effects of fiscal and monetary policies***
10. **Comprehend the basics of theories of macroeconomic instability***
11. **Comprehend unemployment and inflation tradeoffs***
12. Comprehend the effects of the federal government's budget deficit
13. Comprehend the concept of long run growth and policies to affect growth
14. Comprehend comparative advantage
15. Comprehend the determinants of foreign trade flows and exchange rates, and their effects on the domestic economy
16. Apply economic reasoning to better understand and critically evaluate real world circumstances and events

BUSINESS TAG - FACULTY PARTICIPANTS

Name	Institution
Dick Arndt	Cleveland State University
Michael Bila	Ohio University
Michael Bodnar	Stark State Community College
Chuck Bohelke	Owens Community College
Tom Deckleman	Owens Community College
Santhi Harvey	Central State University
Mary Ann Hovis	James A. Rhodes State College
Ralph Katerberg	University of Cincinnati
Richard Kent	Kent State University
Jim Laremore	Terra State Community College
Davis Nenna	Hocking College
Nancy Merritt	Bowling Green State University
Sheila Petcavage	Cuyahoga Community College – West
Raul Ramos	Lorain Community College
Michael Rex	James A. Rhodes State College
William Snavelly	Miami University
William Taylor	Terra State Community College
Rao Unnava	Ohio State University(The)
Jeffrey Vance	Sinclair Community College
Richard Williams	Wright State University
Vicky Wood	Marion Technical College
Betty Young	Northwest State Community College
Jay Yutzey	Ohio State University (the)
Terribeth Gordon-More	University of Toledo
Debbie Jones	University of Toledo
Robert Strayer	Edison Community College