

Developing Management Accountants

STUDENTS
NEED TO INTEGRATE THEIR
ACCOUNTING, MANAGEMENT, AND
LIBERAL ARTS COURSEWORK SO THEY
CAN BE EFFECTIVE IN THE WORKPLACE.
AN INNOVATIVE COLLEGE PROGRAM
IS HELPING THEM DO THIS.

Alverno College in Milwaukee, Wis., has been a leader in creating innovative ability-based undergraduate education for more than 40 years. Our approach is based on three key principles:

- (1) Students should be able to apply what they know;
- (2) abilities are complex—integrating knowledge, dispositions, skills, and self-awareness; and
- (3) assessment is central to learning—helping students to learn and validating their achievements.

As members of the accounting faculty, we asked, “What does ability-based education mean for an advanced-level undergraduate specialization in a program such as accounting?” What emerged is a set of professional outcomes for students majoring in management accounting, an innovative curriculum to prepare them for entry-level accounting careers, and a solid foundation for ongoing professional development.

We believe that the unique features of a liberally educated accountant—an accountant who integrates abilities and knowledge to both think and act—meet the needs of today’s agile business organization. Information has become less expensive, and global markets have led to increased competition, so management requires better information more quickly for decision making. These significant environmental changes require a new emphasis in accounting curricula on business strategy, management issues, use of accounting knowledge to support decisions, and skills that management accountants need to be contributing members of the management team. Management accountants had already moved beyond just crunching numbers and were working on cross-functional teams and were actively involved in decision making. For example, planning, budgeting, and forecasting are critical activities for today’s management accountant to support the operation and strategy of an organization. Others are communication skills—oral, written, and presentation—the ability to work on a team, analytical skills, and a solid understanding of accounting and how a business functions.

**By Regina E. Grantz, CMA;
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Because Alverno is a liberal arts college, we needed to situate the management accounting major within the broader definition of a liberal arts education. In this context, the Alverno faculty identified eight general areas of ability as essential attributes of the liberally educated individual:

- ◆ Communication,
- ◆ Analysis,
- ◆ Problem Solving,
- ◆ Valuing in Decision Making,
- ◆ Social Interaction,
- ◆ Developing a Global Perspective,
- ◆ Effective Citizenship, and
- ◆ Aesthetic Engagement.

Alverno’s entire faculty work collaboratively, teaching students to develop these abilities and reinforcing their efforts. Members of the accounting faculty emphasize the teaching of communication, analysis, problem solving, social interaction, and valuing as central abilities of the accounting profession, but they also recognize their responsibility to reinforce all the abilities and to help students integrate them in as many contexts as possible. Ultimately, a student’s ability to seamlessly integrate these

abilities is the mark of a liberally educated individual.

Table 1 illustrates how these eight abilities are incorporated into the management accounting major to provide the framework for students to develop into competent accounting professionals. The development of communication abilities illustrates how this plays out in the accounting curriculum. In the beginning accounting course, students use their communication skills to explain accounting concepts to a general business audience. In later courses, students further develop this ability in more complex settings with more complicated concepts. They explain to owners of a business the financial record adjustments required to bring their financial statements into compliance with Generally Accepted Accounting Principles (GAAP). They also practice their oral communication skills, integrating their accounting knowledge and ability to use technology to make a professional presentation to a business audience, say, key shareholders of a privately held company.

Combining a strong liberal arts background and an emphasis on affective and qualitative abilities is in line with the skills all accountants need to be effective in their field. This integration of abilities with discipline and

Table 1: Contextualizing College-Wide Abilities in Management Accounting

Communication: Uses oral and written communication skills to meet the needs of various audiences. In this process the student selects, uses, and integrates appropriate technology and software skills to develop informative, explanatory, and persuasive presentations to a variety of audiences, including external and internal users, business and nonbusiness users.

Analysis: Brings a unique accounting perspective to the analysis of organizational issues through the selection and application of accounting principles and frameworks to support and influence decision making.

Problem Solving: Adapts problem-solving processes and integrates them with accounting frameworks to solve problems and improve processes in an organizational context.

Valuing in Decision Making: Integrates personal values and a professional code of conduct to respond to issues in a managerial context. Analyzes valuing and ethical issues that arise from the perspective of various stakeholders.

Social Interaction: Uses appropriate interpersonal and group theory to deal with interpersonal, team, stakeholder, and professional situations to inform, persuade, and influence.

Developing a Global Perspective: Works effectively with the diversity in the workplace by framing accounting issues in a broader global context, understanding the social and cultural roots of accounting standards, and providing accounting support as part of a global business strategy.

Effective Citizenship: Understands corporate social responsibility within organizational contexts and the social role and impact of accounting information. Integrates personal, professional, and community values in a decision-making context as a member of an organizational management team.

Aesthetic Engagement: Combines abilities developed in the liberal arts (a heightened aesthetic sensibility, a way of seeing beneath the surface of things, and a desire to engage texts intensely and personally) with business principles to understand broader social and organizational issues and create a personal world view that influences interactions and actions.

Table 2: Professional Outcomes for the Management Accounting Major

1. Analytical Thinking and Action

The student integrates principles from accounting and management theory with liberal arts, learning to interpret and analyze business situations and to communicate effectively with others in a variety of contexts.

2. Cooperative Organizational Thinking and Action

The student uses accounting frameworks to initiate and implement problem solving and process improvement in organizational contexts.

3. Perspective Taking and Working with Others

The student uses management theory to interact effectively in professional contexts that require leadership of groups or other types of interpersonal interactions.

4. Developing Self and Acting with Integrity

The student responds to management and accounting issues in a manner consistent with personal and professional codes of conduct.

content—such as accounting, finance, economics, marketing, organizational theory, technology, business policy, and strategy—helps students develop as self-aware, independent, lifelong learners. Being reflective practitioners is at the heart of being professional management accountants in the 21st Century workplace.

Professional Outcomes for the Management Accounting Major

In 1994, management accounting was introduced as a specialization within the School of Business. It built on existing courses and introduced two new accounting courses to provide a program that established a competitive edge by targeting students interested in a career in industry rather than public accounting. The program was so popular that Alverno established a major in management accounting in 1999. Table 2 identifies the professional outcomes for the management accounting major and represents what our students should be able to do with what they know when they graduate.

These outcomes serve as a learning map for students and a curriculum plan for faculty as they create courses, learning experiences, and assessments that help students achieve these outcomes throughout their studies. Within a course, learning experiences and performance assessments are designed with criteria related directly to the explicit course outcomes. These professional outcomes guide faculty as they refine course content and assignments.

Creating an Effective Curriculum in Management Accounting

As we began the process of creating the management accounting major, we realized that our graduates weren't

integrating their accounting knowledge effectively to address business issues. They tended to address problems from a limited, discrete accounting perspective, which was how accounting courses were taught. This conflicted with our strong belief that our students need to integrate their accounting, management, and liberal arts coursework to meet the needs of the profession and be effective in the workplace.

Drawing on the research cited at the end of this article, we identified a framework to organize a coherent, integrated, and logical set of learning experiences that would help students develop skills the professional management accountant required. This sets the accounting curriculum in a broad business and liberal arts context. It also provides the opportunity to blend traditional accounting topics with emerging topics in a coherent, integrated way.

Table 3 shows the developmental sequence and coordination of the management accounting major and its business and management components.

In "Introduction to Accounting," faculty introduce students to the conceptual framework and qualitative characteristics of accounting information that make it useful to a wide range of internal and external stakeholders, such as owners, managers, creditors, and investors. This stakeholder focus is reinforced in subsequent courses as students explore their knowledge of accounting principles and integrate it with an understanding of and appreciation for a professional code of conduct. Drawing on a framework for valuing in decision making introduced in their general education courses, students consider the multiple perspectives of owners, managers, customers, and employees when addressing financial recording and reporting issues. They must demonstrate their under-

Table 3: Management Accounting Major and its Business and Management Components

	MANAGEMENT ACCOUNTING	BUSINESS AND MANAGEMENT
Foundation Courses	<ul style="list-style-type: none"> • Introduction to Accounting • Accounting Principles 	<ul style="list-style-type: none"> • Introduction to Management • Economic Environment • Microeconomics
Integrating Accounting and Intermediate Supporting Courses	Accounting Issues: <ul style="list-style-type: none"> • New Enterprise • Reporting and Management • Growth and Expansion • Going Public 	<ul style="list-style-type: none"> • Managing in Organizations • Probability and Statistics • Marketing Principles and Management • Finance • Experiential Learning Seminar • Internship
Capstone Professional Experiences and Advanced Courses	<ul style="list-style-type: none"> • Audit: Internal and External • Independent Study for CMA Examination (Elective) • Electives 	<ul style="list-style-type: none"> • Small Business Management • Business Policy and Strategy • Business Enterprise Practicum • Electives

standing of the responsibilities of the practicing professional accountant and use their accounting knowledge to argue persuasively for the appropriate accounting treatment of business transactions. For example, in their role as accountants for a small business, students draw on their understanding of GAAP and adjusting entries to complete the company's accounting cycle. This results in a reported loss for the period, and students explain through a written report to upper management why the adjustments are required.

"Introduction to Management" provides a bridge from the liberal arts to the business and management curriculum. Students are introduced to a brief history of American business to put what they are learning into a broader social context. Then they're introduced to a variety of models, such as the stakeholder model, the balanced scorecard, and the four principal management functions of planning, organizing, leading, and controlling. The application of these models is reinforced throughout their coursework. In subsequent courses, students use the stakeholder model in addition to their accounting knowledge to recommend management actions to improve organizational performance while acknowledging the impact on stakeholders such as creditors.

We create integrated learning for students by designing performance-based assignments that put accounting problems in an organizational context and require a response that combines the ability to communicate effectively and think critically with the subject matter knowledge that's unique to accounting. In completing an

in-basket exercise, students are assigned the role of controller for a small manufacturing business and address a variety of business and accounting problems. In one situation they complete a cost-volume-profit analysis to evaluate the impact of a new product on operating income, identify the sales required to meet the income targets, and justify a pricing recommendation. In another situation, students use their knowledge of costing and budgeting to respond to a comanager's concern about the strain the introduction of this new product will put on production facilities currently operating at capacity. Students develop a revised production plan that maximizes resource utilization and operating profits.

Integrating Accounting Courses and Intermediate Support Courses

As mentioned earlier, we grew increasingly dissatisfied with an accounting curriculum expressed as a series of discrete introductory, intermediate, and advanced courses that focused on financial and managerial accounting issues separately. We were also concerned that such a curriculum addressed neither the career paths of the majority of our students nor the accounting and business knowledge needed by students who intended to work as management accountants rather than public accountants.

Table 4 (see pages 58-59) shows the integrated accounting courses, supported by intermediate business and management courses, that provide our students with the knowledge and skills they need to take a strategic, integrated, and broad stakeholder approach to man-

agement accounting issues. In designing these integrated accounting courses, faculty focused on the stages and issues a business faces from inception to going public.

Students make a critical transition as they progress through this curriculum: They focus less on learning and applying discrete abilities and move to the more integrated performances described in the professional outcomes for the management accounting major. Let's take a look at how accounting issues that affect one group of stakeholders—owners—evolves through this course sequence.

In “New Enterprise Accounting Issues,” students are introduced to various forms of business organizations and are asked to do a comparative tax analysis to evaluate the impact of a Subchapter S election and recommend a strategy to minimize taxes. In this role of consultant to the business, students help the small business owner understand the role of accounting in strategic decision making, performance measurement, and control.

As they move on to “Reporting and Management Accounting Issues,” they independently select and evalu-

ate the use of accounting models to solve less-structured problems related to cost management systems and performance evaluation. Finally, in “Growth and Expansion Accounting Issues” and “Going Public Accounting Issues,” they integrate their abilities with their knowledge of accounting standards to deal effectively with ill-defined, complex employee pension accounting and reporting issues, thus providing support to management. Students are guided in this progressive integration of knowledge and abilities by the articulation of each major outcome and the abilities inherent in them into developmental levels that make learning transparent to both students and faculty. Table 5 (see page 60) illustrates the increasingly complex nature of their problem-solving ability across courses.

Capstone Professional Experiences and Advanced Courses

At this level, students integrate their management accounting major with their advanced-level coursework in business and management. The nature of the learning experiences provides an opportunity for majors to apply their accounting knowledge in broader disciplinary con-

texts. For example, in “Small Business Management,” students independently develop a business plan for their own business idea and integrate accounting information into their decision making to a greater degree. They are expected to develop pro forma financial statements and cash budgets to make sound business decisions supported by financial data and information.

The capstone accounting course, “Audit: Internal and External,” is designed to expose students to a broad range of management issues from an accounting perspective. Students investigate the roles and responsibilities of management with regard to the preparation and reporting of financial information. Through case studies, they critically evaluate management's responsibility for financial information, the role of assurance services in mitigating risk, and the application of internal control concepts to implement an effective control environment to ensure the integrity of accounting information. This means that they identify important accounting and business issues in these cases, use their accounting and business knowledge to weigh alternative policy and operating decisions, and provide sound recommendations based on data and information.

At this point, students may elect to do an independent study that will prepare them to sit for the CMA® (Certified Management Accountant) exam so they can pursue a professional credential in the field of management accounting. This is one of the unique features of Alverno's management accounting program: When students complete it, they are eligible to take the CMA exam. The CMA exam content was an important framework that guided the design of this accounting program.

Professional Experiences

A number of experiences provide a bridge between academic work and professional practice that enables students to apply their accounting knowledge in a broader organizational context. They include internships, an experiential learning seminar, and a business practicum. As part of a business practicum, students serve as consultants to a small business or not-for-profit. These experiences add to their classroom contributions, bringing a practitioner perspective to issues and problems that enriches the classroom experience for all.

We believe extracurricular activities also provide students a unique opportunity to integrate the knowledge and skills they gained in the classroom, so we systematically design experiences to integrate classroom and

Table 4: Integrated Accounting Courses

COURSE NUMBER, TITLE, AND DESCRIPTION	PROFESSIONAL OUTCOMES CONTEXTUALIZED BY COURSE (REFER TO TABLE 2)
<p>MGA 275 New Enterprise Accounting Issues</p> <p>In this course, students use their critical-thinking and problem-solving abilities to address accounting and financial management issues for a small business. These include using accounting information for strategic planning, supporting decisions, and performance measurement and understanding the environment in which the company operates.</p>	<ol style="list-style-type: none"> 1. Analytical Thinking and Action <ul style="list-style-type: none"> • Implement a balanced scorecard approach to organizational performance measurement and evaluation. 2. Cooperative Organizational Thinking and Action <ul style="list-style-type: none"> • Use cost behavior concepts to analyze operating costs to identify their impact on planning, decision making, and financial reporting. • Apply cost behavior concepts and cost-volume-profit analysis to influence and support strategic and operating decisions facing a new business. • Use planning and budgeting processes to support strategic and operating decisions that reflect a variety of stakeholder concerns and perspectives. • Use income tax principles and regulations to address basic income tax accounting issues facing a small business. • Identify, critically evaluate, and select appropriate working capital management strategies to respond to a variety of stakeholder needs. 3. Perspective Taking and Working with Others <ul style="list-style-type: none"> • Use interpersonal and task-oriented models to work effectively with others to address accounting issues. 4. Developing Self and Acting with Integrity <ul style="list-style-type: none"> • Identify the relationship between Generally Accepted Accounting Principles and a professional code of conduct to address planning and earnings management issues. • Critically evaluate the regulatory and operating environments to ensure compliance with laws and GAAP to promote organizational social responsibility. • Draw upon and reinforce your valuing and social interaction abilities as you engage in independent and collaborative problem solving.
<p>MGA 375 Reporting and Management Accounting Issues</p> <p>As the business grows, the professional accountant takes on an even greater role in decision support and strategic decision making. In this course, students apply their individual and interpersonal skills to deal with more complex issues. They develop and use management accounting information to provide guidance to management on cost management systems, variance analysis, capital budgeting, and performance evaluation of responsibility centers.</p>	<ol style="list-style-type: none"> 1. Analytical Thinking and Action <ul style="list-style-type: none"> • Identify and analyze the links between effective management accounting and control systems. • Integrate accounting and management knowledge with problem-solving abilities to identify and effectively address stakeholder accounting issues. 2. Cooperative Organizational Thinking and Action <ul style="list-style-type: none"> • Identify, select, critically evaluate, and apply cost systems for this type of business. • Identify and explain connections between management accounting systems and financial reporting requirements as outlined in GAAP. 3. Perspective Taking and Working with Others <ul style="list-style-type: none"> • Use interpersonal and task-oriented models to work effectively with others to address accounting issues. 4. Developing Self and Acting with Integrity <ul style="list-style-type: none"> • Identify the relationship between management accounting, GAAP, and a professional code of conduct to address planning issues. • Draw upon and reinforce your valuing and social interaction abilities as you engage in independent and collaborative problem solving.
<p>MGA 376 Growth and Expansion Accounting Issues</p> <p>Students provide the accounting and financial expertise needed to support the implementation of</p>	<ol style="list-style-type: none"> 1. Analytical Thinking and Action <ul style="list-style-type: none"> • Integrate accounting and management knowledge with problem-solving abilities to identify and effectively address stakeholder accounting issues. • Communicate analyses and conclusions to a variety of audiences. 2. Cooperative Organizational Thinking and Action <ul style="list-style-type: none"> • Research, critically evaluate, and apply GAAP to financial accounting issues.

COURSE NUMBER, TITLE, AND DESCRIPTION

global business decisions. They add unique value to the management team by integrating liberal arts learning and global perspective taking with their accounting knowledge and expand this accounting knowledge to include international accounting standards.

MGA 475

Going Public Accounting Issues

Students critically examine the accounting, managerial, and social implications of taking a business public. They address complex accounting and reporting issues by integrating their accounting knowledge with their citizenship abilities in an ever-widening circle of key stakeholders.

MGA 487

Audit: Internal and External

This course examines how management, as a user and a source of information, uses independent assurance services, auditors, internal consultants, and internal control to inform themselves and other stakeholders. To effectively manage the accounting environment, management accountants need a clear understanding of information quality, risk management, and the controls that ensure the integrity of information used for planning, decision making, and financial reporting. In this course, students develop that understanding, examine the management accountant's responsibilities and professional standards, and explore issues related to information quality.

PROFESSIONAL OUTCOMES CONTEXTUALIZED BY COURSE (REFER TO TABLE 2)

- Identify, explain, and critically evaluate connections between accounting theory and practice.
- Master necessary quantitative skills to respond to and accurately solve financial accounting problems.

3. Perspective Taking and Working with Others

- Using interpersonal and task-oriented models to work effectively with others to address accounting issues.

4. Developing Self and Acting with Integrity

- Identifying the relationship between Generally Accepted Accounting Principles and a professional code of conduct to address ethical dilemmas.
- Drawing upon and reinforcing your valuing and social interaction abilities as you engage in independent and collaborative problem solving.

1. Analytical Thinking and Action

- Selecting and evaluating appropriate written and oral communication strategies to communicate financial information to internal and external audiences.

2. Cooperative Organizational Thinking and Action

- Integrating management accounting code of conduct, organizational code of conduct, and personal values to respond to ethical issues that arise in a global enterprise.

3. Perspective Taking and Working with Others

- Critically evaluating accounting implications of the strategic choices made by management in a global marketplace.
- Drawing upon and reinforcing your valuing and social interaction abilities as you engage in independent and collaborative problem solving.

4. Developing Self and Acting with Integrity

- Applying an accounting research model to identify and critically evaluate financial reporting issues facing an expanding global enterprise.
- Mastering necessary quantitative skills to respond to advanced financial accounting problems.

1. Analytical Thinking and Action

- Independently selecting, evaluating, and applying appropriate information quality assurance and internal control concepts to improve the relevance and reliability of information for decision making.
- Using appropriate oral and written communication skills to effectively communicate analyses and recommendations that will assist management to better inform themselves, inform other stakeholders, and comply with laws, regulations, and external reporting requirements.

2. Cooperative Organizational Thinking and Action

- Identifying and applying decision models that use financial and nonfinancial information to add value for management and the business as a whole.
- Identifying and applying appropriate information quality assurance and internal control concepts to ensure decisions are based on relevant and reliable information, assets are protected, and progress toward goals is monitored effectively.
- Understanding and effectively communicating the role of information systems and assurance services in the organizational and external environments in order to respond to emerging issues.

3. Perspective Taking and Working with Others

- Independently identifying and applying appropriate interpersonal and team skills to gather, synthesize, and report information for decision making.
- Acting in a manner consistent with the professional code of conduct.

4. Developing Self and Acting with Integrity

- Using a professional code of conduct to identify and resolve ethical and professional issues.

Table 5: Problem-Solving Ability**Foundation**

Identifies and defines problems in structured, discipline-specific situations.

Intermediate

Independently selects and evaluates problem-solving strategies in a variety of discipline-specific situations.

Advanced

Integrates a variety of discipline perspectives to collaboratively develop solutions to multifaceted organizational problems.

Exit

Uses accounting frameworks to initiate and implement problem solving and process improvement in organizational contexts.

extracurricular learning. We encourage management accounting majors to participate in the Alverno College Institute of Management Accountants Student Chapter (AIMASC). Through their involvement in AIMASC, they

refine their professional skills, reinforce the habit of life-long professional development, and explore emerging accounting and business issues. Students also are encouraged to attend the monthly meetings of the Greater Milwaukee Chapter of IMA® to hear professionals speak on a variety of topics.

Seeing the Big Picture

The management accounting major at Alverno College is unique because it's based on the principles of liberal education and dedicated solely to management accounting. Students (and later their employers) benefit because of their ability to “see the big picture” and the important relationships that exist between accounting and other disciplines (e.g., management). In addition, management accounting students from Alverno College are equipped for lifelong learning, can integrate theory and practice, and can hone their problem-solving skills in situations that simulate the complexities of the business world. When they graduate, they are able to perform the duties of a management accountant their first day on the job. **SF**

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Regina Grantz and William McEachern developed the management accounting major at Alverno and wrote a large part of *Ability-Based Learning Program: Management Accounting Major*, a 2001 publication of the Alverno College Institute that describes the program. They used several studies as a guide:

Alverno College Faculty, *Analysis and Communication at Alverno: An Approach to Critical Thinking*, 1984.

Alverno College Faculty, *Valuing in Decision-making: Theory and Practice at Alverno College*, 1992.

Gary Siegel and James E. Sorensen, *The Institute of Management Accountants and Financial Executives Institute, Joint IMA/FEI Position Statement on the Results of a Survey: What Corporate America Wants in Entry-Level Accountants*, 1994. Issued at the annual meeting of the American Accounting Association, New York, N.Y., August 12, 1994.

Gary Siegel and James E. Sorensen, *The Practice Analysis of Management Accounting*, Institute of Management Accountants, Montvale, N.J., 1996.

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W. Steve Albrecht and Robert J. Sack, *Accounting Education: Charting the Course through a Perilous Future*, Accounting Education Series, Volume 16, American Accounting Association, Sarasota, Fla., 2000.

Marcia Mentkowski & Associates, *Learning that Lasts, Integrating Learning, Development, and Performance in College and Beyond*, Jossey-Bass Publishers, San Francisco, Calif., 2000.