Developing a Master of Health Administration with a Concentration in Medical Logistics

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**Abstract**

 Health care administration programs have been created for training purposes for those wishing to purpose a business education with a focus on health care. There are several different levels of training for health care administration including extension courses, certificate programs, undergraduate and graduate collegiate programs. The graduate level of training is generally considered the highest level of training. While there are several Master of Health Administration (MHA) programs throughout the United States, there are no programs at the MHA level with a specific concentration for medical logistics. There are several Master of Business Administration (MBA) programs that have a focus on logistics, but do not have a health care focus.

 The purpose of an MHA program with a medical logistics concentration is to provide insights for colleges, universities and agencies who desire a specific education program focused on health care administration and medical logistics management. The MHA program has been developed with a 46 semester credit hours general track which are the core courses that are health care administration specific and a 13 semester credit hours concentration for medical logistics specific courses such as health care contracting, health care value analysis, health care procurement, health care logistics and biomedical repair management. The total credit hours for the MHA with a medical logistics concentration is 59 semester hours for degree completion. The estimated time requirement for a graduate student taking a fulltime load of 12 semester hours would be approximately 18 months.

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**Introduction**

 There are several business focused programs such as a Master of Business Administration (MBA) with tracks for supply chain management. Higher education programs that specifically train for medical logistics remain minimal in the United States. There are several programs that have health care administrative degrees such as the Master of Health Administration (MHA). MHA programs focus on some of the key competencies for medical logistics such as finance, health services delivery and risk management. There are no specific tracks in MHA programs that specifically address medical logistics operations within health care organizations. An MHA with a track specifically for medical logistics could be created to train students specifically for medical logistics within health care organizations throughout the United States. According to the United States (US) Bureau of Labor and Statistics (2022), health services managers are projected to grow 28 percent from 2021 to 2031 with an estimated need of 56,600 health services managers (page 1).

The MHA curriculum needed for students would include traditional MHA subjects such as health care delivery, health care finance, health care economics, health care risk management and other operational topics. The difference for an MHA with a concentration in medical logistics would be a track that included at least 13 semester credit hours for medical logistics. The 13 semester hours would include a minimum of five courses that specifically focuses on medical logistics in health care organizations. The courses would include health care strategic sourcing and contract management, health care value analysis, health care procurement, health care warehouse management and biomedical repair/engineering management.

**Master of Health Administration Domains**

The MHA Program is designed to include all major competencies required for health care management generalist positions, whether early careerist or mid-level careerist. The MHA Program Competency Model (with a concentration in medical logistics) consists of 6 domains comprising 22 competencies that align with the MHA Program’s mission of providing a foundation for health care administration based on practices that are evidence based. The six domains are listed with each set of competencies per domain.

**Knowledge of the Healthcare Environment (Domain)**

#### The United States Health Care System (Competency)

#### The ability to describe health care systems throughout the continuum of care with a primary focus on organizational strategy and management (Scott & Yap, 2020).

#### Legal and Regulatory Environment (Competency)

The ability to describe the legal and regulatory environment in which healthcare organizations and managers operate, recognize the implications of that environment for leadership and management to include compliance and policy influence (Scott & Yap, 2020).

#### Healthcare Economics (Competency)

The ability to explain concepts, measures, issues and practices related to the economics of healthcare financing in the United States and how those concepts affect organizational and political decision making.

 **Business Management and Skills (Domain)**

#### Operations Management (Competency)

The application of operations management concepts to improve efficiency, effectiveness across the continuum of care in the healthcare sector (Scott & Yap, 2020).

#### Strategic Management (Competency)

The ability to assess the internal and external environment and develop strategies and methods that improve organizational performance consistent with the mission (Scott & Yap, 2020).

#### Human Resource Management (Competency)

The ability to interact with, recruit, retain, manage and motivate a diverse workforce in accordance with legal requirements and optimize performance to meet the strategic goals of the organization (Scott & Yap, 2020).

#### Financial Management (Competency)

The ability to read and analyze financial statements, prepare and manage budgets, explain the impact of different payment models, make sound short-term and long-term investment decisions and business incorporation (Scott & Yap, 2020).

#### Project Management (Competency)

The ability to design, plan, execute and assess tasks and develop appropriate timelines related to performance, structure, outcomes and budgets in pursuit of stated goals (Scott & Yap, 2020).

#### Organizational Performance and Quality Management (Competency)

The ability to explain and use quantitative and qualitative methods to measure and improve organizational performance across the continuum of care, especially as it relates to healthcare quality (Scott & Yap, 2020).

#### Health Information Systems and Technology Management (Competency)

The ability to explain and effectively use health information technology and health informatics to include metrics to enable and support health care operations and transformation (Scott & Yap, 2020).

### Leadership and Professionalism (Domain)

#### Critical Thinking, Problem Solving, and Decision-Making (Competency)

The ability to analyze qualitative and quantitative data and other information to develop solutions to organizational issues used in support of leadership decisions(Scott & Yap, 2020).

#### Communication (Competency)

The ability to effectively absorb and communicate pertinent information in written and oral form across a wide variety of settings and among different audiences (Scott & Yap, 2020).

#### Team Leadership and Participation (Competency)

The ability to effectively lead healthcare teams to include participating in teams, management meetings, promoting team effectiveness, and evaluating team performance (Scott & Yap, 2020).

#### Innovation and Change Management Leadership (Competency)

The ability to lead and manage through dynamic processes or projects and obtain concurrence among people for change within the governance structures of various healthcare organizations (Scott & Yap, 2020).

#### Integrity, Ethics, Honesty, and Self-Assessment (Competency)

The ability to conduct oneself at all times with a high level of integrity, in an ethical manner and with honesty that merits trust from all stakeholders resulting from on-going self-reflection and self-assessment (Scott & Yap, 2020).

#### Health Care Policy (Domain)

#### ****Health Policy Analysis**** (Competency)

**The ability to analyze the effects of health policy on providers, healthcare organizations, payers and populations and its implications for organizational response and change** (Scott & Yap, 2020).

#### ****Public Health Improvement**** (Competency)

**The ability to establish goals and objectives for improving health outcomes that incorporate an understanding distributions and social determinants of health and socioeconomic environment in which the organization functions** (Scott & Yap, 2020).

###  Health Care Analytics (Domain)

#### Decision Making (Competency)

The ability to implement decision-making processes from information derived from risk measures, stakeholders, and organizational values(Scott & Yap, 2020).

#### Systems Thinking (Competency)

The ability to apply tools for systems thinking to identify the interrelationships between and among stakeholders and apply these insights into developing effective plans and policies (Scott & Yap, 2020).

#### Data Management and Analysis (Competency)

The ability to properly identify, collect, analyze, measure and manage the data required for effective organizational management and problem solving(Scott & Yap, 2020).

###  Healthcare Supply Chain Operations (Domain)

#### Systems Thinking (Competency)

The ability to apply tools for systems thinking to identify the interrelationships between and among stakeholders and apply these insights into developing effective plans and policies (Scott & Yap, 2020).

#### Data Management and Analysis (Competency)

The ability to properly identify, collect, analyze, measure and manage the data required for effective organizational management and problem solving(Scott & Yap, 2020).

###  Course Descriptions

###  A course description is defined as a short statement that informs a student about the subject matter for a course to include the approach and application for the subject. The primary goal for a course description is to provide an overview of content. Course descriptions can also be used for accreditation purposes and for the evaluation of transfer credit. Course descriptions in many cases are used to populate data for enrollment purposes into various academic registration systems (University of Hawaii/Manoa, 2022).

### Course Credits

### Course credit represents the time spent represented in hours for a given program course. One credit represents approximately 15 contact hours. Course credit is represented in the heading for each course description.

###  MHA Course Descriptions (Concentration in Medical Logistics)

#### Introduction to the United States Health Care System (3)

### This course is designed to assists students in relation to learning about essential aspects of the organization, financing and delivery of healthcare in the United States. Students will acquire an enhanced understanding of the complex U.S. healthcare system. The course has a macro-level orientation; however, the material necessitates considering how the many facets of the US healthcare system affect communities, families and individuals. The US healthcare system is like an ecosystem with various sub-components that interact with each other and with broader social, economic and political forces to create a complex, dynamic and intricate system. We can change the healthcare system, but we need to consider how proposed changes will affect other components of the system and broader society as well as what resistance various stakeholders will likely put forth (Eastern Virginia Medical School, MHA Curriculum, 2021).

#### Information Systems for Health Care Services (3)

This course provides the key concepts related to information technology within healthcare organizations. The course explores how information technologies are used as a tool to enhance performance within healthcare organizations for positive health outcomes. Topic areas include various information technologies used in the healthcare sector; methods for assessing and ensuring information technology value; laws, regulations and standards to guide the practice; achieving effectiveness through information technology; and the latest developments including business and clinical intelligence and telemedicine. The course also includes implementation stages as electronic record adoption models (Eastern Virginia Medical School, MHA Curriculum, 2021).

#### Leadership in Healthcare Organizations (3)

The emphasis of this course is on the practice of leadership and leadership methods. The course will equip the student with the basic managerial background, fundamentals and the theories which will be applicable at any level in management and in a leadership position. Students will be exposed to the interaction of leadership, change, communication and power as seen in the healthcare environment. This course will examine the traits of leadership, developing leadership skill, creating a vision and managing conflicts and obstacles in an organization (Eastern Virginia Medical School, MHA Curriculum, 2021).

#### Health Policy (3)

Policy and Politics of Health, explores the development, implementation, and evaluation of health policies in the United States. Health policies include those that address the organization, financing, regulation, and evaluation of both personal and public health services. The tension between government's role in providing for the general welfare and protecting the public's health while recognizing the privacy rights of the individual will receive considerable attention as will the provision of healthcare within the context of a federal system of government. The long-term trend toward a more expansive role for governmental institutions and the media and the differential impact of economic, cultural and social factors, interest groups, social disparities and public opinion will be addressed in some detail. Students will develop an understanding of the policy process and the most common approach to policy research. The course includes exercises that will lead to a more comprehensive understanding of the most important types of public policy in the U.S. healthcare system and the capacity to conduct a reasoned analysis of a policy issue (Eastern Virginia Medical School, MHA Curriculum, 2021).

**Financial Management (3)**

This course covers financial management in healthcare organizations including, but not limited to, financial decision-making using accounting information, operation of business units, principles of economics, operating budget and capital budgeting processes along with budgetary and financial controls. Financial performance will be analyzed along with revenue determination and profitability. General accounting foundations and terminology will be covered (Eastern Virginia Medical School, MHA Curriculum, 2021).

#### Legal and Regulatory Environment (3)

This course examines legal, regulatory and ethical issues health professionals are likely to confront in healthcare environments. In this course, we will examine the legal principles needed to analyze regulatory and liability issues. We will study selected principles and policies under-girding health the American system of health law, including common law principles of liability and federal/state legislation regulating health professionals and operations. We will also discuss the impact of state and federal law on the operation of various health-related organizations (Eastern Virginia Medical School, MHA Curriculum, 2021).

**Human Resource Management (3)**

The ability to interact with, recruit, retain, manage and motivate a diverse workforce in accordance with legal requirements and optimize performance to meet the strategic goals of the organization. Compliance such as equal opportunity, Americans with Disability Act, staffing and full-time equivalent calculations are some if the focal topics for the class (Eastern Virginia Medical School, MHA Curriculum, 2021).

**Healthcare Law and Ethics (3)**

This course examines legal, regulatory and ethical issues health professionals are likely to confront in healthcare environments. In this course, we will examine the legal principles needed to analyze regulatory and liability issues. We will study selected principles and policies under-girding health the American system of health law, including common law principles of liability and federal/state legislation regulating health professionals and operations. We will also discuss the impact of state and federal law on the operation of various health-related organizations (Eastern Virginia Medical School, MHA Curriculum, 2021).

**Healthcare Strategic Sourcing and Contract Management (3)**

Reinforces and increases knowledge of the principles of contract formation and administration. Major topics include: market research, acquisition and source selection planning, contract types and financing, request for proposals, protests, subcontract administration, contract finance and debt collection, contract payments and prompt payments, termination, delays, quality assurance and changes, claims, and closeout. (University of Virginia, Procurement and Contract Management Certificate, 2021)

**Healthcare Value Analysis (3)**

Healthcare value analysis contributes to optimal patient outcomes through an evidenced-based systematic approach to review healthcare products, equipment, and technology and group purchase organizations. Using recognized best practices, and in collaboration with organizational resources, value analysis evaluates appropriate utilization, risk/benefit, clinical efficacy, and safety issues for the greatest financial value (Association of Healthcare Value Analysis Professionals, Value Analysis Defined, 2021).

**Healthcare Procurement (3)**

The basics of healthcare procurement defined and methods identified. Healthcare procurement in explained as to why procurement is an important component of healthcare operations. Procurement related information examined to include ordering medical supplies, accounts payable, vendor relations, credit card limits, invoicing, recalls and substitutions to be discussed. Consumption data to evaluate demand utilizing internal and external analytics to be discussed. Negotiation processes examined to overview methods of negotiation for healthcare procurement. Procurement ethics and customer service examined to include potential problem resolution methods (The Association for Health Care Resource & Materials Management, Essentials of Purchasing Certificate, 2021).

**Healthcare Logistics Management (3)**

This course examines healthcare logistics management to include inventory management, first in and first out methods, just in time approaches, stock rotation, reorder points, safety stock, prime vendor operations, safety protocols and regulatory requirements. The course examines electronic ordering systems and interfaces for health care logistics management (Scott & Yap, 2020). The course will also focus on healthcare logistics in relation to transporting supplies.

**Biomedical Repair Management (1)**

Course overviews electrical safety testing, patient monitoring, medical treatment devices, medical imaging and contract compliance. Students will be instructed from a management point of view to include budget, preventative maintenance, safety and regulatory requirement associated with accreditation and local, state and federal compliance (St. Petersburg College, Medical Repair Certificate, 2021).

**Conclusion**

 The potential domains and competencies could be used to illustrate how a Master of Health Administration program can be developed with a concentration in medical logistics. There are several Master of Business Administration programs and supply chain degrees, but there are no programs with a specific focus on healthcare and medical logistics for students wishing to specialize in healthcare with a specialization in medical logistics. This paper outlines the potential domains and competencies that could be used by higher education institutions to develop a healthcare focused degree with a medical supply chain track to educate students desiring to specialize. Programs such as long-term care and pharmaceutical operations have been developed for MHA programs at various higher education institutions. The Master of Health Administration with a concentration in medical logistics would be a new program that would meet the direct need for healthcare organizations seeking to hire junior to mid-level professionals directly out of college.

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<https://www.scps.virginia.edu/procurement-contracts-management-certificate>

**APPENDIX A**

**PROPOSED MASTER OF HEALTH ADMINISTRATION COURSE SCHEDULE**

**59 SEMESTER CREDIT HOURS\***

Fall 1 (12 hours)

MHA 000 Introduction to Health Care Systems (3 hrs)

MHA 000 Health Policy and Politics (3 hrs)

MHA 000 Organizational Management (3 hrs)

MHA 000 Biomedical Repair Management (1 hr)

Spring 1 (12 hours)

MHA 000 Healthcare Strategy (3 hrs)

MHA 000 Healthcare Economics (3 hrs)

MHA 000 Health Law and Ethics (3 hrs)

MHA 000 Healthcare Logistics Management (3 hrs)

Summer 1 (10 hours)

MHA 000 Effective Information Technology for Healthcare Organizations (3 hrs)

MHA 000 Leadership (3 hrs)

MHA 000 Healthcare Value Analysis (3 hrs)

MHA 000 Administrative Introduction (1 hr)

Fall 2 (12 hours)

MHA 000 Financing Healthcare (3 hrs)

MHA 000 Healthcare Human Resources (3 hrs)

MHA 000 Healthcare Marketing (3 hrs)

MHA 000 Healthcare Strategic Sourcing and Contract Management (3 hrs)

Spring 2 (12 hours)

MHA 000 Conflict Analysis and Negotiations (3 hrs)

MHA 000 Leveraging Data for Effective Decision-Making (3 hrs)

MHA 000 Healthcare Reimbursement (3 hrs)

MHA 000 Healthcare Procurement (3 hrs)

Summer 2 (3 hours)

MHA 000 Administrative Residency (3 hours)

**\*** Courses could be developed based on three courses per semester which would create a need for two additional semesters which a full time student would complete in two and a half years versus two years as proposed.