

HEALTH ADMINISTRATION AND POLICY (HAP)

200 Level Courses

HAP 201: *Health Professions Careers*. 3 credits.

Acquaints students early in their college education with a variety of health professions careers. Provides overview of the health care system, and identifies the current supply and demand for health care professionals. Presents information about educational and licensing requirements as well as expected salaries. Defines professionalism and outlines the principal rights and responsibilities of being a health care professional. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 202: *Medical Terminology*. 3 credits.

Prepares students with a basic understanding of medical terminology needed to work in a wide variety of healthcare environments. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 290: *Lifestyle Management*. 3 credits.

In this introductory course on practical application of Bayesian causal modeling techniques and Statistical Process Control tools, students make resolutions and analyze their progress toward goal achievement. Each student maintains a diary and analyses it using Bayesian causal modeling techniques to understand the constraints and causes leading to their success and failures. Students analyze their pattern of success using Statistical Process Control tools and engage cyclical assessment of their self improvements. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

300 Level Courses

HAP 301: *Health Care Delivery in the United States*. 3 credits.

Introduces students to the history of health care delivery in the United States from pre-colonial times to the present. Exposes students to how healthcare services are organized, accessed, and delivered. Explores influences that impact access and healthcare public policy decisions; factors that determine the allocations of healthcare resources; the establishment of priorities within the healthcare system; and the relationship of healthcare costs to measurable benefits. Comparisons are made with healthcare delivery systems in other countries. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 308: *Public Health Informatics*. 3 credits.

Provides students with a basic understanding of public health Informatics and its applications. Students will understand the basic technological tools and building blocks needed to utilize these tools in to improve their personal and professional productivity. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 309: *Healthcare Accounting*. 3 credits.

Introduces basic concepts, standards, practices and terminology underlying financial and managerial accounting as applied in healthcare organizations. Key concepts include accounting principles and conventions; financial reporting; valuations of assets; analysis, interpretation, and communication of financial information; the management of costs and profitability; and the use of spreadsheets and other tools. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 310: *Healthcare Ethics*. 3 credits.

Introduces current ethical ideas and issues in healthcare and the healthcare system. Case studies require students to apply critical thinking in ethical decision making situations encountered by healthcare professionals. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 312: *Healthcare Law*. 3 credits.

Introduces students to the legal environment in healthcare with emphasis on laws and regulations of routine importance to healthcare managers in the areas of labor, contracts, real estate, medical malpractice, general business, and intellectual property. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301.

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 318: Introduction to IT Methods for Healthcare. 3 credits.

Reviews computer hardware and software with applications in healthcare. Covers basic features of operating systems (Windows and Linux), reviews use of basic office applications and introduces their advanced features. Introduces advanced tools to access and analyze healthcare data. Introduces basic programming concepts. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: IT 103 or IT 104 or equivalent.

Schedule Type: Laboratory, Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 360: Introduction to Health Information Systems. 3 credits.

An introduction to basic information management in health care service organizations. Provides an overview of health information systems for selected administrative functions and clinical care services, including electronic data interchange for billing and claims management, institutional approaches to ensuring data security and privacy, and information management and decision support for managers and clinicians. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 361: Health Databases. 3 credits.

Introduces students to the design and use of various health and healthcare databases, and provides hands-on experience with database design and use. Reviews database management systems. Examines the application of databases for both clinical and managerial purposes. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 360

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 392: Human Resources Management in Healthcare. 3 credits.

Exposes students to the major issues, laws, administrative processes, procedures, and psychological factors related to the human resource function in healthcare. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301.

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 395: Healthcare Finance. 3 credits.

Introduces finance in health care organizations. Reviews issues in reimbursement structures, regulatory mechanisms, cost control, and related factors affecting financial management of health service organizations including financial decision support skills. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301.

Registration Restrictions:

Required Prerequisites: HAP 309^C or 309^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 396: Strategic Health Management and Planning. 3 credits.

Introduces past and present interventions that affect supply and demand for health care at community, state, regional, and national levels. Presents health planning and regulatory entities, and discusses strategic and program planning in context of current economic and market conditions. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

400 Level Courses**HAP 403: Assisted Living/Senior Housing Management and Philosophy.** 3 credits.

Overview of growth of assisted living industry, its role in health care continuum, current or proposed regulatory environments, and differences between assisted living and other forms of senior health care and senior living services. Specific instruction provided in philosophy and day-to-day management of assisted-living communities, including resident care, operations, finance and budgeting, human resources and staffing, and successful marketing and community relations. Also examines industry future, including cutting-edge programs and technologies, and approaches to creating next generation of assisted-living services. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture**Grading:**

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 404: Senior Housing Sales and Marketing. 3 credits.

Introduction and analysis of sales and marketing practices within senior housing environments, including but not limited to Active Adult (55+), assisted living, Alzheimer's assisted living, and Continuing Care Retirement Communities (CCRC's). Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 408: Societal and Health Related Needs of the Aging Population. 3 credits.

Introduces students to the social, medical, emotional, and cognitive supports available to older adults in the United States. Provides an overview of societal and health related needs relating to aging. Exposes students to aging services available to older adults. Explores the physical and emotional needs of the elderly. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 410: Introduction to Health/Medical Practice Management. 3 credits.

An introductory course in the leadership and management of ambulatory health service practices and small provider organizations. Content covers a variety of health/medical practice management functions, including administrative systems, operations and strategies for effective management of quality, efficiency and business performance (contracts and marketing), and human resources. Trends in practice integration and affiliations with multiprovider groups and larger enterprises will be covered. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 309.

Registration Restrictions:

Required Prerequisites: HAP 301^C or 301^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 411: Introduction to Revenue Cycle Management. 3 credits.

Introduces the revenue cycle process and its role within a clinical practice setting to support the overall financial health of the organization. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 416: Leadership and Management of Health Systems I. 3 credits.

Introduces theoretical concepts and their application to the leadership and management of effective health care organizations. Explores the structure and function of health-related organizations and selected administrative and operational issues in program development and service design, emphasizing strategies for effective performance management, decision making, and communication. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts. Equivalent to NURS 436.

Recommended Prerequisite: Complete all 300-level course requirements.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 417: Leadership and Management of Health Systems II. 3 credits.

Explores challenges to providing effective leadership and management of health care organizations and systems of care related to operational issues such as personnel management and labor relations, information management, conflict and goal alignment, financial management, accountability, and quality and safety improvement. Focuses on identification of management skills, technology, and strategy that influence optimal performance and communication between clinicians, administrative staff, and managers. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: HAP 416^C or 416^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 425: Health Economics and Policy. 3 credits.

An introduction to the role of economics in health care policy. Concepts used by economists to analyze health outcomes, health behaviors, health care markets, health insurance markets, and the role of government. Concepts are linked to current health policy debates. Relevance and limits of the health economics approach to analyzing health issues are discussed. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: (HAP 301^C or 301^{XS}) and (ECON 103^C or 103^{XS}).

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 430: *Process Improvement in Healthcare Organizations*. 3 credits. Introduces the process of quality management in healthcare organizations. Exposes students to the principles, models, and tools of quality management. Presents guidelines for implementing total quality in healthcare. Contrasts quality assurance, quality control, quality improvement, and quality management. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: HAP 301^C or 301^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 436: *Electronic Health Data in Process Improvement*. 3 credits. Focuses on using electronic health records (EHRs) to improve health care processes. Compares means and rates of clinical & managerial processes. Uses EHRs in risk-adjusted statistical process control. Uses Excel to analyze data on patient satisfaction, wait time, mortality/morbidity, and cost of care. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 440: *Mobile Health*. 3 credits.

Introduces emerging technologies used in Mobile Health (mHealth). Students will examine the impact and potential of mobile devices on health. Students will conceptualize and design health apps that incorporate evidence-based guidelines and capitalize on the mobility, portability, and input and output capabilities of smartphones and tablets. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 442: *Introduction to Health Care Politics and Policy*. 3 credits.

Reviews health care system issues and trends, and economic concepts, ways to understand the critical role of public health policy and the policy-making process in the United States. Identifies the major political institutions and policy processes that shape health policy. Examines the past and present health policy and its impact on changes in the ability of patients to access health services, the practice of health sciences professionals, and the quality and process of care. Explores the role of politics at both the federal and state government in health policy-making and critical aspects of the U.S. health system are compared to those of other countries. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: HAP 301^C or 301^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 445: *Introduction to Health Services Research*. 3 credits.

An introductory course for undergraduate students in understanding the basic methods of interdisciplinary health services research and program evaluation in health systems and policy. Emphasis is placed on understanding, assessing and using relevant findings from health services research. The course covers a variety of topics related to policy, management, and program evaluation in health delivery systems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: HAP 301^C or 301^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 455: *Computer Programming in Health Applications*. 3 credits.

Introduces concepts of computer programming of health applications with a focus on open source software. Students are provided with an introduction to open source software and introduced to open source EHR systems. Practical exercises in programming to customize and extend the capability of health information systems are explored, implemented and tested. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: ((HAP 318^C, 318^{XS}, IT 106^C, 106^{XS}, 109^C or 109^{XS}) and (HAP 361^C, 361^{XS}, IT 214^C or 214^{XS}) and (HAP 464^C or 464^{XS})).

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 456: *Health Data Mining and Analysis*. 3 credits.

Introduces data mining and analysis in health. Exposes students to fundamental concepts of data mining, machine learning, data preprocessing and data visualization within the context of health applications. Students learn practical skills needed to apply these methods to health problems illustrated by case studies. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 318 or IT 106 or IT 109 or equivalent, HAP 361 or IT 214 and knowledge of SQL, Completed required math core, or permission of instructor

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 458: Clinical Informatics Applications in a Health Care Setting. 3 credits.

Provides health informatics students with an overview of how various health professionals use data from various information systems to support clinical decision-making and improve patient outcomes. Leverages classes, laboratory simulation and field work in a health care setting. Introduces students to team-based working relationships/work in the health care environment and the use of health information in that setting. Exposes students to simulated and real health environments with the focus on the use of information technology to support clinical workflows, data collection and decision making. Teaches students to collaborate with healthcare professionals in order to promote patient care goals for safety, efficiency, effectiveness, timeliness, is patient-centered, and equitable. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: ((HAP 318^C or 318^{XS}) and (HAP 360^C or 360^{XS})).

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 459: Health Data Standards and Interoperability. 3 credits.

Introduction to prevailing and emerging data standards applicable in health information technology. Students will learn about standard-making organizations, such as HL7 and Healthcare Information Technology Standards Panel (HITSP), and their standardization processes. The structure of and relationship between standard terminologies applicable in healthcare, such as International Classification of Diseases (ICD-10-CM), Logical Observation Identifiers Names and Codes (LOINC) and Systematized Nomenclature of Medicine–Clinical Terms (SNOMED-CT), will be explained. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 301 or permission of instructor. HAP 361.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 460: Information Technology Project Management. 3 credits.

Identifies methods and skills for managing health care information technology (IT) projects. Students learn tools such as critical path analysis, resource management, crashing projects, vendor selection, quality assessment, and risk analysis. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 360.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 461: Internet and Web Technology Applications for Healthcare. 3 credits.

Introduces students to the major applications of Internet and Web technology in healthcare. Two major applications are studied: online promotion/marketing for consumer-oriented health web sites, and online Personal Health Records (PHR). Students will learn about Search Engine marketing and the practical skill of creating an online health marketing/promotion campaign. They also will learn to create and manage PHR. The technological challenges such as reliability, privacy, security and organizational barriers to adoption are discussed. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 360.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 462: Privacy and Security in Health Informatics. 3 credits.

Health information security and privacy issues in the current healthcare system. Evaluates methods to achieve privacy and security. Discusses the important role of sound security policies and procedures; looks into technical solutions and non-technical solutions for achieving privacy and security. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 360.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 464: Electronic Health Record Configuration and Data Analysis. 3 credits.

Demonstrates hands-on practice in development of prognostic indices, including Charlson Comorbidity Index, Multi-morbidity Index, and other measures of severity of illness. Includes measurement and analysis of data-driven patient safety indicators. Students analyze Electronic Health Records (EHRs) or Insurance databases to measure severity-adjusted outcomes of care. Includes analysis of role of rare diseases in healthcare performance measures. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 465: Integration of Professional Skills and Issues. 3 credits.

Assists students in synthesizing the varied dimensions of their roles as health professionals in a global society. Provides opportunities to examine issues in health care through reflection on the natural and behavioral sciences, humanities and other prerequisite coursework. Selected topics examined through writing, presentation, reading and discussion. Prepares the student to actively engage in critical thinking, professional writing, and self-reflection. Provides the student the

opportunity to develop a persuasive argument, receiving peer and instructor feedback. (Writing intensive course). Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts. Equivalent to NURS 465.

Mason Core: Mason Core (All), Mason Apex (<http://catalog.gmu.edu/mason-core/>)

Specialized Designation: Writing Intensive in Major

Registration Restrictions:

Required Prerequisites: (HAP 301^C or 301^{XS}) and (ENGH 302^C or 302^{XS}).

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Enrollment limited to students with a class of Senior Plus or Senior.

Enrollment is limited to students with a major in Health Administration or Health Informatics.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 467: Advanced Information Technology Project Management. 3 credits.

Teaches project management methods and techniques with focus on health IT projects. Covers knowledge, skills, and abilities associated with certification (Certified Associate in Project Management).

Notes: Certification is not provided in this course. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: HAP 460 or HAP 417 or equivalent.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 489: Pre-Internship Seminar. 3 credits.

Provides students with guidance and preparation for engaging in the internship. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Recommended Prerequisite: Senior standing.

Registration Restrictions:

Required Prerequisites: HAP 301^C or 301^{XS}.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Enrollment is limited to students with a major in Health Administration or Health Informatics.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 494: Special Topics in Health Administration and Policy. 3 credits.

Selected topics analyzing specialized areas in health administration and policy. Notes: Content varies. Lecture, seminar, laboratory, and workshops. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the term for a maximum 12 credits.

Specialized Designation: Topic Varies

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 498: Health Administration Internship. 4 credits.

Provides variety of applied management experiences in a health systems or related organization (field agency), under the direction of a HAP faculty member and a preceptor in the field. Students integrate and apply critical-thinking, project-planning, and management and communication skills in the internship experience and toward completion of an approved internship project. Notes: Taken in last semester of studies. Capstone course involves a two-hour weekly seminar and a 12-hour internship in a health-related organization. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). Limited to three attempts.

Mason Core: Mason Core (All), Mason Apex (<http://catalog.gmu.edu/mason-core/>)

Registration Restrictions:

Required Prerequisites: HAP 489 or 489^{XS}.

^{XS} Requires minimum grade of XS.

Enrollment limited to students with a class of Senior Plus or Senior.

Enrollment is limited to students with a major in Health Administration or Health Informatics.

Schedule Type: Internship

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 499: Independent Study in Health Administration and Policy. 1-6 credits.

Provides individual study of a particular problem area in health administration and policy research, theory development, or education under the direction of faculty. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the term for a maximum 6 credits.

Specialized Designation: Topic Varies

Schedule Type: Independent Study

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

500 Level Courses

HAP 559: Cybersecurity for Hospital Executives. 3 credits.

Survey course in Cybersecurity challenges and best practices for Hospitals, Clinics, and other Healthcare Providers. This course addresses the vulnerability of cybersecurity for healthcare organizations. The focus is on limiting vulnerability to cyberattacks by addressing human factors. Beginning with routine electronic communications and moving on to sophisticated spear-phishing and other forms of cyber-attacks, the course reverse-engineers the social engineering of health care workflows that may make even the most experienced and vigilant end-

users vulnerable. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 594: *Special Topics in Health Care*. 3 credits.

Selected topics analyzing specialized areas in health care. Notes: Content varies. Lecture, seminar, laboratory, and workshops. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 6 credits. Equivalent to GCH 594.

Specialized Designation: Topic Varies

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

600 Level Courses

HAP 601: *E-Commerce and On-line Marketing for Health Services*. 3 credits.

Explores development of online health services; organization of online businesses; online marketing, financial, and clinical transactions; and venture capital and the IPO process. Explores creating and maintaining web pages and databases. Reviews literature on effect of computer services on patient care and health care organizations. Also reviews examples of both successful and bankrupt technology firms in health care. Student groups draft business plan and develop early version of service proposal. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 602: *Statistics in Health Services Management*. 3 credits.

Focuses on descriptive and inferential statistics with applications of various statistical techniques to health services management. Topics include sampling, measures of central tendency and dispersion, probability distributions, hypothesis testing, analysis of variance, correlation, linear regression, and chi-square analysis. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 609: *Comparative International Health Systems*. 3 credits.

Uses Roemer's Model of Health Systems to examine resource allocation, management, and health outcomes in the United States and around the globe. The structure and functioning of national health systems based on geographic location and governance in developing and developed countries (democracies, monarchies, and communist nations). Resource allocation across the continuum of nations and relationship to national health needs, health status, and longevity are examined. Notes: An online course in comparative international health care systems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 618: *Computational Tools in Health Informatics*. 3 credits.

Introduces computational tools used in health informatics. Reviews hardware and software needs and uses. Topics covered include operating systems, virtualization and high performance computing, basic programming in a scripting language, basic data analysis and data integration skills, and use of specialized software. All topics are covered in context of specific solutions used in health information systems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 621: Leadership and Organizational Behavior. 3 credits.

Applies organizational behavior and theories of leadership to the management of interdisciplinary teams and decision making in healthcare organizations. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 622: Healthcare Information Systems Analysis and Design. 3 credits.

Introduces system analysis, modeling, design, and management of large-scale healthcare information systems. Describes both traditional and data-driven analysis and design methods. Different aspects of systems analysis and design are illustrated using examples from healthcare industry case studies applied to a group project. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 635: Role of Government in Health Care and Public Health. 3 credits.

Provides a foundation for how and why federal and state governments are involved in health care and public health. Introduces students to contemporary public policies that address inequities in access and quality of public health and health care services. The process of how public health policy is formulated, implemented and evaluated is covered in detail. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 640: Current Issues in Health Policy. 3 credits.

Introduces students to current health policy issues, the public policy process, and their influence on the organization and financing of health care. Attention is given to the 1) roles of key players in health policy formulation and implementation, and 2) public policy responses to major issues such as disparities and un-insurance coverage, cost-containment, and quality of care. Differing perspectives on reforming health care are debated. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 645: Introduction to Health Services Research. 3 credits.

An introductory course in the basic methods of interdisciplinary health services research and program evaluation in health systems and policy. The course covers topics related to policy, management, and program effect and evaluation within health delivery systems, including research design, existing data systems, measurement of quality and basic cost benefit, and effectiveness analysis. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 6 credits.

Recommended Prerequisite: HAP 678.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 647: Regulatory Requirements for Health Care Systems. 3 credits.

Helps health care professionals understand link between infrastructures of organization and regulatory and accreditation processes for health

care organizations. Covers major accrediting agencies and their roles, accreditation principles, and survey process. Focuses on hospitals with reference to ambulatory care, managed care organizations, rehabilitation centers, laboratories, and home health and long-term care facilities. Emphasizes requirements of Joint Commission on Accreditation of Health Care Organization and regulations mandated by Health Care Finance Administration. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 652: *Essentials of Health Insurance and Managed Care*. 3 credits. Focuses on the health insurance and managed care private sector. Topics include moral hazard; the history of private benefits plans; types of health plans; provider network management; provider payment; medical and quality management; health plan operations including marketing/sales, claims, member services, IT, finance; and relevant health policy, and federal and state laws and regulations affecting private health plans. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 655: *Computer Programming in Health Applications*. 3 credits. Explores concepts of computer programming of health applications with a focus on open source software. Students are provided an overview of open source software and explore details of open source EHR systems. Practical exercises in programming to customize and extend the capability of health information systems are explored, implemented and tested. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (HAP 618^B or 618^{XS}).

^B- Requires minimum grade of B-

^{XS} Requires minimum grade of XS.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 661: *Policy Development and Analysis for Community Health Programs*. 3 credits.

Prepares students to critically analyze issues and develop skills pertinent to effective policy development for community and family public health programs. Explores what constitutes a vulnerable population and examines current government programs and policies supporting these programs for such populations. Recent case examples ground students in current issues faced by community groups and other health interests. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 670: *Introduction to Health Informatics*. 3 credits.

Examines applications of information technology in healthcare. Considers a wide range of technology applications – from enterprise application systems to EHR (Electronic Health Records), to current trends in information technology and related regulatory initiatives. Examines how these technologies enable the healthcare industry to manage information and knowledge resources most effectively and deliver superior services to its customers. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 671: *Health Care Databases*. 3 credits.

Introduces students to design and query of health databases. Provides hands-on experience with design, maintain and make queries of databases. Explores uses of health record systems. Includes review and analysis of databases and database management systems. Examines application of databases to clinical and business transaction. Offered

by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 672: Health Data: Vocabulary and Standards. 3 credits.

Explores the challenges and possible solutions to ensure the interoperability between health information systems, representation of health data using standardized vocabulary and standards of communication. Covers topics such as data standards and semantics, policy, and theory and practice of standardization. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 618 or HAP 671 or permission of instructor

Recommended Corequisite: HAP 678 or permission of instructor

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 675: Project in Health Data Analysis. 1-4 credits.

Focuses on analysis of data from electronic health records. Includes instruction on preparation of data including (a) removing inaccurate information, (b) organizing the timing of events/variables, (c) summarizing time-based variables. Students will work on real data obtained by them from a practicum through an employer or real data supplied by instructor. Students will complete a literature review, describe methods used, present results, and discuss findings. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the term for a maximum 4 credits.

Specialized Designation: Topic Varies

Recommended Prerequisite: HAP 361 and HAP 602 or equivalent statistics and database courses.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Independent Study

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 678: Introduction to the U.S. Health System. 3 credits.

Explores the U.S. healthcare system focusing on health system development, key influences, accessibility, financing, changing components and the effects of the system on patients, providers, financiers, government, insurers, and society. The role of population health management and public health is explored, including the impact of social, cultural, economic, and environmental factors on health care systems and practices. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 680: Applied Public Health Leadership and Management. 3 credits.

Survey course in leadership, management, and planning applied to public health systems. Students apply theoretical knowledge from a variety of disciplines relevant to development and implementation of public health policy, regulatory directives, public health program planning and management (including human resources and financial management), and the design and evaluation of public health services/functions. Content includes strategies for ensuring access to essential public health services and use of evaluation and monitoring systems to ensure the safety, efficiency, and effectiveness of local public health programs/systems. Course emphasizes leadership, communication, systems thinking, data-driven decision making, and ethical practice in public health systems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 686: Quality Improvement in Health Services. 3 credits.

Examines how quality in healthcare is measured and controlled in order to improve processes and outcomes. Demonstrates how interdisciplinary teams analyze quality by applying a variety of quantitative methods (such as statistical process control, histograms, and Pareto charts); and qualitative methods (such as root cause analysis, affinity diagrams, nominal group technique, and flow charts). Analyzes performance

improvement techniques designed to improve processes. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 690: Independent Study. 1-3 credits.

In-depth studies of selected area of health science theory, research, or practice under direction of faculty. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Independent Study

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 697: The Healthcare Quality Environment. 3 credits.

Analyzes the quality and systemic challenges in U.S. health care with a focus on political and environmental influences. Discussion of payer reform, technology, scientific advances, consumer preferences, and health equity. As the landscape changes, the fundamental work of strategists must also change, both in response to and in anticipation of emerging trends. Addresses those trends and how to meet these new challenges head on. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 698: Quality Measurement and Evaluation. 3 credits.

Examines how quality in healthcare is measured and evaluated to improve processes and outcomes. Demonstrates how interdisciplinary teams analyze quality by applying a variety of quantitative methods (such as statistical process control, histograms, and Pareto charts);

and qualitative methods (such as root cause analysis, affinity diagrams, nominal group technique, and flow charts). Analyzes performance improvement techniques designed to improve processes. Introduces applied evaluation methods for real world patient quality improvement efforts that seek to implement evidence-based healthcare. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 699: Liability in Health Care Quality and Patient Safety. 3 credits.

Examines how the central concerns in health law and policy - cost, quality, access, and choice - interact. Discusses state and federal quality-control regulation, including professional licensure, privileging, discipline and Medicare and Medicaid provider certification for health care organizations. Liability of health care organizations for quality failures, including the impact of ERISA preemption, is explored.

Addresses the affect of nondiscrimination obligations as a matter of quality in health care is addressed. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

700 Level Courses

HAP 700: Introduction to Health Informatics. 3 credits.

Examines applications of information technology in healthcare. Considers a wide range of technology applications - from enterprise application systems to EHR (Electronic Health Records), to current trends in information technology and related regulatory initiatives. Examines how these technologies enable the healthcare industry to manage information and knowledge resources most effectively and deliver superior services to its customers. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Corequisite: HAP 678 or permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 701: *Health Data: Vocabulary and Standards*. 3 credits.

Explores the challenges of representing health care data using standardized vocabulary in health information systems. Topics include data standards and semantics, policy, and theory and practice of standardization. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Corequisite: HAP 678, or permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 702: *Managerial Accounting in Health Care*. 3 credits.

Examines the controllership function of health care organizations and systems (for-profit and not-for-profit) with emphasis on policy formulation and evaluation of performance, including cost methods and systems, measurement criteria, and managerial planning, methods, and techniques. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Graduate-level statistics course.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 703: *Financial Management in Health Systems*. 3 credits.

Examines tools and methods of financial management in healthcare organizations and systems with emphasis on allocation and use of funds. Analyzes costs and constraints of alternative source of funds, and applies financial decision instruments and effect on operational management and market value of entity. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Graduate-level statistics course.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 704: *Contemporary Issues in Health Systems Management*. 3 credits.

Analyzes the challenges confronting healthcare leaders in a new era characterized by economic incentives and changing relationships between providers, payers and purchasers, new delivery models and payment mechanisms, and advances in clinical integration, information technology, and quality improvement. Explores leadership strategies required for achieving financial stability while delivering greater value. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (HAP 602^{B-}, 652^{B-}, 707^{B-}, 715^{B-} and 750^{B-}).

^{B-} Requires minimum grade of B-.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 705: *Strategic Management and Marketing in Health Care*. 3 credits.

Explores the role of strategic planning in healthcare organizations and the process by which they formulate, implement, and evaluate strategic decisions. Reviews the contemporary issues and trends impacting the strategic imperatives for healthcare organizations, including ways in which organizations evaluate and address the health needs of the communities they serve. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (HAP 602^{B-}, 652^{B-}, 715^{B-} and 750^{B-}).

^{B-} Requires minimum grade of B-.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 706: *Integrated Health Systems Management*. 3 credits.

Explores emerging structures for financing and delivery of comprehensive health services in integrated health systems. Covers successful development and management of alliances, provider hospital organizations, and managed care systems with emphasis on strategies for vertical integration, community partnering, contract negotiation, governance, and management of antitrust situations. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 707: *Human Resource Management in Healthcare*. 3 credits. Examines how people are managed within health care organizations to achieve performance consistent with the organization's strategic objectives. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 708: *Quantitative Methods in Health Care Management*. 3 credits. Presents a framework for decision making in health care management. Covers epidemiological, statistical and decision modeling tools commonly used in health care management. Includes measures of risk, forecasting, decision trees and statistical quality control. Students use Excel to analyze data sets related to the application of these techniques in assessing health care related problems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisite: HAP 602^B.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 709: *Health Care Databases*. 3 credits.

Introduces design and use of health and medical databases, providing hands-on experience. Explores uses of medical record systems. Includes review and analysis of databases and database management systems. Examines application of databases to clinical and managerial transaction. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Laboratory

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 711: *Quality Improvement in Health Services*. 2 credits.

Examines how quality in healthcare is measured and controlled in order to improve processes and outcomes. Demonstrates how interdisciplinary teams analyze quality by applying a variety of quantitative methods (such as statistical process control, histograms, and Pareto charts); and qualitative methods (such as root cause analysis, affinity diagrams, nominal group technique, and flow charts). Analyzes performance improvement techniques designed to improve processes. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 712: *Topics in Public Policy*. 3 credits.

Presents selected topics current in public policy related to health care and health care administration. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 6 credits.

Specialized Designation: Topic Varies

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 713: *Project Management in Health Information Technology*. 3 credits.

Applies body of knowledge in project management to the implementation of information technology and systems in healthcare organizations. Examines how tasks such as needs assessment, project planning, project cost analysis, risk management, and management of personnel are readily included in the use of health information systems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 715: *Health Economics*. 3 credits.

Uses economic tools to illuminate the healthcare delivery and financing systems in the US. Explores the production of and demand for health, health care, and health insurance, and how incentives affect choices.

Focuses on the US but also draws examples from other countries, since health economics principles apply everywhere, even though values, resources, priorities and constraints vary. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 717: *Population Health Informatics*. 3 credits.

Provides students with foundational principles, informatics tools, methodologies, data sources, terminologies, and policy issues related to the emerging field of population health informatics. Examines key concepts such as registries, electronic health records, epidemiological databases, and quality reporting. Employs specific health informatics tools throughout the course, with many opportunities for gaining practical experience. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 709.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 718: *Consumer Health Informatics*. 3 credits.

Exposes students to the emerging subfield of health informatics, which is at the intersection of public and community health, health education, and more traditional informatics areas. Demonstrates the use of technology to increase awareness and improve population health. Reviews issues involved in consumer health informatics, and explores hands-on informatics tools and applications. Offered by Health Administration &

Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 709.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 719: *Advanced Statistics in Health Services Research I*. 3 credits.

Covers principles and methods of statistical data analysis and inference. Emphasizes the use and application of various data analysis techniques and their assumptions. Computer outputs will be used to demonstrate the application of statistical techniques in analyzing health related data sets. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 602 or GCH 601 or an equivalent statistics course.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 720: *Health Data Integration*. 3 credits.

Students learn to manipulate large databases, create link table queries, write SQL application programs, understand sources of data conflicts, and identify methods of integrating ODBC databases with legacy data. Covers data warehousing, methods of analyzing large databases, including Bayesian belief networks and machine learning in health care context. Features semester long data integration group project. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 721: *Project in Data Analysis*. 1-4 credits.

Focuses on analysis of data from electronic health records. Includes instruction on preparation of data including (a) removing inaccurate information, (b) organizing the timing of events/variables, (c) summarizing time-based variables. Students work on real data obtained by them from a practicum through an employer or real data supplied by instructor. Students must complete a literature review, describe methods used, present results, and discuss findings. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 4 credits.

Recommended Prerequisite: HAP 361 and HAP 602 or equivalent statistics and database courses.

Schedule Type: Independent Study

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 725: *Statistical Process Control in Healthcare*. 3 credits.

Provides students with hands-on experience with data from electronic health records. Introduces students to causal analysis of observational data, including propensity scoring and stratification. Provides students with access to simulated data from electronic health records. Exposes students to trends that influence the quality management system and drivers for change, including measures used by CMS to strengthen value based payment. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 730: *Health Care Decision Analysis*. 3 credits.

Students analyze practice patterns and find optimal methods of improving them. Uses decision analysis and failure mode analysis in health care settings. Students integrate scientific evidence, patients' preferences, and experts' opinions to identify optimal alternatives. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Graduate-level statistics course.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 740: *Management of Health Information Systems*. 3 credits.

Introduces health and medical information systems with emphasis on systems analysis and design to support managerial and clinical communications and decision making. Explores trends and innovations in information technology and systems, focusing on managerial oversight of health and medical information systems. Explores contemporary management strategies for information systems personnel. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 742: *Health Policy Development and Analysis*. 3 credits.

Provides an overview of the core elements of a health policy analysis, including problem definition, background, policy options, and recommendations. Explores the policymaking process, key stakeholders, and types of analytic frameworks used in the development of U.S. healthcare policy. Students will apply key concepts and frameworks to analyze a health policy issue and clearly communicate information in written assignments and oral presentations. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 745: *Health Care Security Policy*. 3 credits.

Focuses on health security and privacy policy and compliance issues. Students will develop policies for the type of threats faced by facilities. The legal and business policies for facility, personnel, travel, information, and patient security will be discussed. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 746: Health Policy Leadership. 3 credits.

Examines leadership strategies to influence health policy-making from a community stewardship and interest group advocacy perspective. Students will develop an understanding of how health and socio-economic issues affect the development, implementation and change of health policy, appreciate the complexity of engaging the public policy process, and selectively employ strategies to influence politics and the policy making process. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 6 credits.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture**Grading:**

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 750: Legal Issues in Health Administration. 3 credits.

Examines legal issues facing the healthcare industry. Prepares health professionals to understand legal principles, statutes, regulations, and case law related to managing health care organizations and health professionals' practice. Students are provided with practical knowledge of health law and its application to actual work experience. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture**Grading:**

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 760: Philosophy of Science in Health Services Research. 3 credits.

An introductory course on the theory and philosophy of science and humanism that relate to the design and conduct of health services research. The course examines selected theories on the nature of reality (ontology), the justification of knowledge claims (epistemology), and how knowledge is constructed (methodology) in design and analysis of health services research. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Admission to a doctoral program or permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture**Grading:**

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 761: Philosophy of Science and Research Methods. 3 credits.

Introduces the philosophy of science and methods used to conduct health services research. Examines the justification of knowledge claims (epistemology), approaches to research study design, and the application of analytic methods and data to develop knowledge in field of health services research. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Admission to a doctoral program or permission of instructor.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture**Grading:**

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 764: Health Policy and Government Payment Systems for Health Care Services. 3 credits.

Examines the rationale for government intervention in provider payment and explores the current policy issues and politics of major government provider payment systems, including Medicare and Medicaid, and examines options for managing these programs more effectively. The course will "follow the money" as it flows through government and provider payment systems, model potential changes in such systems, and identify policies for improving the operation of these programs and payment systems. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture**Grading:**

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 770: Medical Decision Making and Decision Support Systems. 3 credits.

Introduces the complex subject of medical decision making. Examines systematic approaches to decision making. Explores principles governing the design, application, and maintenance of clinical decision support systems. Laboratory time provides learning experience in various applied situations. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 701 or permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Laboratory, Lecture**Grading:**

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 774: Artificial Intelligence in Health. 3 credits.

Reviews artificial intelligence (AI) methods in the context of health applications. Covers AI approaches to problem solving, uncertain reasoning, human-computer interaction, machine learning, intelligent optimization and simulation. Students are provided with theory and practical exercises in the context of Electronic Health Records and intelligent devices used in health. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 618, HAP 671, HAP 719, HAP 752 or permission of instructor. Knowledge of Python programming and SQL are required.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Laboratory, Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 777: Health Data Visualization. 3 credits.

Introduces the principles and techniques of data visualization with special focus on applications in healthcare. Students will learn practical skills to make visually appealing graphics on web browsers to present their data using a publicly available JavaScript library D3 (Data-driven documents). Notes: Assumes that students have basic knowledge of the web, browsers, HTML, CSS, and JavaScript programming. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 780: Data Mining in Health Care. 3 credits.

An introductory course to data mining and knowledge discovery in health care. Methods for mining health care databases and synthesizing task-oriented knowledge from computer data and prior knowledge are emphasized. Topics include fundamental concepts of datamining, data preprocessing, classification and prediction (decision trees, attributional rules, Bayesian networks), constructive induction, cluster and association analysis, knowledge representation and visualization, and an overview of practical tools for discovering knowledge from medical data. These topics are illustrated by examples of practical applications in health care. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Graduate-level statistics course.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 786: Workshop in Health Informatics. 3 credits.

Links material learned in the informatics courses with industry needs. Students work on a common challenge/problem in health informatics that can be addressed with material covered in the core courses of the program. All students work on the same problem in small groups of 2-3 people. The instructor has arranged access to data, and lectures on solutions to the problem. Students are expected to implement the solution, reports its performance, and communicate their findings. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (HAP 618^{B-}, 671^{B-} and 672^{B-}).

^{B-} Requires minimum grade of B-.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 789: Pre-Capstone Professional Development Seminar. 0-3 credits.

Provides students with guidance and preparation for engaging in the capstone practicum. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 3 credits.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 790: Capstone Practicum in Health Systems Management. 3 credits.

Field practicum in health systems management where students function as an integral member of an organizational entity to complete a non-thesis project while continuing to build skills in leadership, critical thinking and systematic problem analysis. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisite: HAP 789^{*B-}.

^{*} May be taken concurrently.

^{B-} Requires minimum grade of B-.

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Internship

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 793: Final Project in Applied Health Policy. 3 credits.

Provides students experience in executing an approved written research project related to a public health policy issue. Students will demonstrate skills learned in the MSHMP program. Projects require students to understand different positions related to a particular policy issue, to assess existing evidence and research related to the policy issue, and to formulate additional research questions. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 795: Health Informatics Pre-Capstone. 0 credits.

Students work to satisfy a required checklist to qualify for enrolling in the Capstone in this no-credit prerequisite for the Health Informatics Capstone (HAP 796). Students finalize their professional profile and career goals, work on communication with employers to identify organizations to conduct their practicum projects, run interviews, initiate on-boarding, and administrative requirements. Capstone is a vital part of the program, failure to satisfy these requirements checklist in this class will result in inability to register for the Capstone (HAP 796). Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Completion of all core courses in the program, and most of concentration courses.

Registration Restrictions:

Required Prerequisite: HAP 786^{*B-}.

* May be taken concurrently.

^{B-} Requires minimum grade of B-.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 796: Health Informatics Capstone Practicum. 3 credits.

Enables students to apply the skills and knowledge they acquired throughout the program in a real-world professional environment. Students function as an integral member of an organizational entity to work on a project that provides a well-rounded experience under the joint direction of a faculty member and a preceptor. Students are expected to select from a wide variety of organizations to conduct their field practicum. Students are expected to independently identify an organization to conduct their field practicum and secure faculty approval. Offered by Health Administration & Policy (<http://catalog.gmu.edu/>)

[colleges-schools/public-health/health-administration-policy/](http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/)). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (HAP 786^{B-} and 795).

^{B-} Requires minimum grade of B-.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Fieldwork

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 797: Radiology Informatics. 3 credits.

Provides an overview of technologies used in radiological informatics, including radiology related information acquisition, storage, retrieval, processing, communication, and the use of this information in an efficient and effective manner to improve the quality of patient care. Designed for health informatics students without strong background in mathematics, physics, or biomedical engineering. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 618, HAP 780, or permission of instructor.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate or Non-Degree.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 799: Master's Thesis. 1-6 credits.

Provides students with skills to develop their research proposal, conduct their research, and complete their thesis in a relevant field of study. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree.

Recommended Prerequisite: Admission to one of the master's programs in the department and permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate or Non-Degree level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Thesis

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

800 Level Courses

HAP 819: Advanced Statistics in Health Services Research II. 3 credits.

Covers principles and methods of advanced statistical data analysis and inference with applications in health services research. Emphasizes

the use and application of various data analysis techniques, including multivariate statistics, regression and longitudinal data analysis. Use of statistical software STATA demonstrates the application of statistical techniques in analyzing health related data sets. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 719.

Registration Restrictions:

Enrollment is limited to Graduate level students.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 823: Causal Analysis & Comparative Effectiveness. 3 credits.

Apply knowledge of discovery and data science methods to create network models of health data to predict population and public health outcomes. Analyze massive, high-dimensional data, using repeated and chained LASSO regressions, to create Causal Networks, and understand competing effects of multiple causes and mediators. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (HAP 671^{B-} or 671^{XS}) and (HAP 719^{B-} or 719^{XS}).

^{B-} Requires minimum grade of B-.

^{XS} Requires minimum grade of XS.

Enrollment is limited to Graduate level students.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 824: Systematic Literature Review & Meta-Analysis for Health Services Research. 3 credits.

Apply evidence-based approaches to analyze public health problems. Students will identify a current public health problem and conceptualize a systematic literature review to examine the existing evidence on the problems' causes, risk factors, interventions, or policies, then identify the gaps in the literature and explore appropriate strategies to address the problem. Quality assessment of research and meta-analysis will also be included. Students will learn to write a publishable systematic literature review manuscript. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 830: Generative AI Applications in Health. 3 credits.

Applies Generative AI (artificial intelligence) to create conversational decision aids for diagnosis or treatment of patients. Creates bias-free, accurate, and empathetic clinical decision aids for patients and health care providers that complies with all Food and Drug Administration

(FDA) regulations. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Completion of a master's degree required.

Registration Restrictions:

Required Prerequisites: HAP 719^{B-} and 618^{B-}.

^{B-} Requires minimum grade of B-.

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 835: Causal Inference in Health Services Research. 3 credits.

Discusses the nature of causation and alternative means of inferring causal relationships. Included are experimentation, matching, instrumental variables, conditioning, and mechanism in network models. Covers a broad range of methodological considerations that emerge in identifying causal effects. The focus is less on analysis of data and more on considerations of causal inference in non-randomized study design. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment is limited to Graduate level students.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 846: Advanced Health Economics. 3 credits.

Prepares students to conduct economic analysis of the health care market. Covers topics such as the supply and demand of health care services, health insurance and the role of asymmetric information, technology and the cost of health care, the role of government in health care, and health externalities. Highlights current empirical work using state-of-the-art econometric techniques to illustrate how knowledge is advanced and consensus emerges and dissipates over time. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 850: Health Informatics Research. 3 credits.

Introduces technical research methods in the field of health informatics. Reviews quantitative, qualitative and mixed research methods applied to study health informatics problems. Contrasts research methods used in health informatics to those traditionally used in health services

research and health sciences. Provides students concrete examples of health informatics research. Allows students to work on research projects individually and in groups. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 719 or HAP 819, HAP 761, HAP 780

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 865: Health Services Research Seminar. 3 credits.

Builds student professional skills in publishing papers, disseminating research findings at conferences, translating research into practice and policy, and career development. Advances student knowledge in a variety of research topics pertaining to both health systems and policy, and health informatics. Includes student and faculty presentations on completed research studies and those in-progress. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: Complete most core courses (e.g. research methods) in the doctoral program or have instructor's permission to register

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Students in a Non-Degree Post-Baccalaureate or Non-Degree Undergraduate degrees may **not** enroll.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 868: Advanced Research Seminar in Health Policy Analysis. 3 credits.

Seminar on advanced research methods that analyzes theoretical and analytic foundations to critique health services research and health policy analysis. Students synthesize, integrate, and apply theoretical knowledge and advanced skills relevant to health services research, policy analysis, and program evolution. Notes: Limited to doctoral students having completed core courses in statistics and research design, or permission of instructor. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 703 or equivalent or permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate level students.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 880: Advanced Health Data Mining. 3 credits.

Provides the knowledge and skills needed to analyze health data using modern tools. Describes analytics of administrative and clinical data. Covers concepts and tools for big data analytics and NoSQL data analytics. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: HAP 719, HAP 780, or permission of instructor.

Registration Restrictions:

Enrollment is limited to Graduate level students.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

900 Level Courses

HAP 925: Advanced Methods in Qualitative Research for Health Care. 3 credits.

Builds upon the foundation of qualitative research in health care. Designed to develop skills in data generation techniques; data analysis using NVivo and text analysis software, including narrative and intentions analysis; application of standards for qualitative research; and utilization of various styles for qualitative reports and research proposals. The course also reviews mixed methods designs for research studies. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May not be repeated for credit.

Recommended Prerequisite: NURS 920 or HAP 835

Registration Restrictions:

Enrollment is limited to Graduate level students.

Schedule Type: Research

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 940: Advanced Independent Study. 1-9 credits.

Prepares doctoral-level students for the field comprehensive exam in their program of study, and builds knowledge and skills in a specific or individualized health related topic. Designed for doctoral-level students, this independent study course is built by the student with the advice of the potential independent study faculty/dissertation director. It may involve data analysis, synthesis and/or evaluation of research evidence, theory and/or exemplary practice in an area of inquiry or scholarship depending on the student's program of doctoral study. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 18 credits.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Schedule Type: Independent Study

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 998: *Doctoral Dissertation Proposal*. 1-9 credits.

An independent study for HAP doctoral students resulting in the development of a doctoral dissertation proposal. Includes development of the research problem, study methods, data analysis and literature review. Notes: The course must be supervised by a HAP faculty member qualified to serve as a dissertation chair. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 36 credits.

Recommended Prerequisite: Advancement to candidacy.

Registration Restrictions:

Enrollment is limited to Graduate level students.

Schedule Type: Dissertation

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

HAP 999: *Doctoral Dissertation*. 1-9 credits.

Under faculty direction, develop dissertation proposal and complete the dissertation. Offered by Health Administration & Policy (<http://catalog.gmu.edu/colleges-schools/public-health/health-administration-policy/>). May be repeated within the degree for a maximum 25 credits.

Recommended Prerequisite: All courses in the PhD program.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy.

Enrollment is limited to Graduate level students.

Schedule Type: Dissertation

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)