

## **HEALTH CARE SYSTEMS (WH) {HCMG}**

### **101. Health Care Systems. (C) Harrington.**

This introductory course takes a policy and politics angle to health care's three persistent issues - access, cost and quality. The roles of patients, physicians, hospitals, insurers, and pharmaceutical companies will be established. The interaction between the government and these different groups will also be covered. Current national health care policy initiatives and the interests of class members will steer the specific topics covered in The course aims to provide skills for critical and analytical thought about the U.S. health care system and the people in it.

### **202. (ECON039) The Economics and Financing of Health Care Delivery. (C) Pauly. Prerequisite(s):** Economics 1 & 2 or consent of instructor.

The course provides an application of economic models to demand, supply, and their interaction in the medical economy. Influences on demand, especially health status, insurance coverage, and income will be analyzed. Physician decisions on the pricing and form of their own services, and on the advice they offer about other services, will be considered. Competition in medical care markets, especially for hospital services, will be studied. Special emphasis will be placed on government as demander of medical care services. Changes in Medicare and regulation of managed care are among the public policy issues to be addressed. Students who take HCMG 202 may not also take HCMG 302, ECON 039, or ECON 236 for further credit.

### **203. Clinical Issues in Health Care Management: Doctors, Patients and Managers in Modern Society. (B) Asch. Clinicians, Patients, and Managers in Modern Society.**

This course will explore the effects of the changing health care environment on the physician, patient and health care manager. It is intended for any undergraduate with an interest in how 1/7th of the American economy is organized as well as those planning careers as health care providers and managers. The course complements other health care courses (that take a societal perspective) by focusing on the individuals who participate in the health care enterprise. There are no prerequisites, as the course will stand on its own content. The course will be divided into modules that focus on the participants of the health care process and the process itself. We will analyze the patient, the doctor, and manager in light of the patient-doctor interaction, the turbulent health care marketplace, expensive new technologies, resource allocation, and ethics.

### **204. (HCMG859) Comparative Health Care Systems. (A) Danzon.**

This course examines the structure of health care systems in different countries, focusing on financing, reimbursement, delivery systems and adoption of new technologies. We study the relative roles of private sector and public sector insurance and providers, and the effect of system design on cost, quality, efficiency and equity of medical services. Some issues we address are normative: Which systems and which public/private sector mixes are better at achieving efficiency and equity? Other issues are positive: How do these different systems deal with tough choices, such as decisions about new technologies? Our main focus is on the systems in four large OECD countries--Germany, Canada, Japan, and the United Kingdom--but we also look at other countries with interesting systems- including Italy, Chile, and Singapore. We will draw lessons for the U.S. from foreign experience and vice versa.

### **211. (HCMG854, LGST211, LGST811) Legal Aspects of Health Care. (A) Rosoff.**

This course offers a current and historical overview of the regulation of health care delivery and financing in the US. It examines principles and practical applications of the laws that affect the operational decisions of health care providers, payors, and managers and that impact development of markets for health care products and services. Also considered are the social and ethical issues encountered in trying to balance the interests, needs and rights of individual citizens against those of society. For part of the term, the class will divide into two groups so that students can focus on their choice of (1) health care management (antitrust law, and regulation of the drug and medical device industry) or (2) selected issues of patients' rights (e.g. abortion, treatment of terminal patients, etc.)

### **212. Health Care Quality and Outcomes: Measurement and Management. (B) Silber. Prerequisite(s):** Introductory Statistics or permission of instructor.

This course will familiarize students with methods used to assess the quality of hospital or provider health care using outcomes data, and to understand and evaluate studies involving health care outcomes. Students are exposed to the mechanics of hospital quality evaluation and challenged to evaluate the medical and health services research literature on health care evaluation, as well as to make inferences regarding hospital quality and the comparison or rankings of hospitals or providers. Topics will include the history of outcomes analysis; the conceptual framework for outcomes studies; consumer demand for information; an overview of medical data and data collection systems; a description of outcome statistics and severity adjustments currently in use; the study of excess variation in outcomes; and the use of

guidelines to assess outcomes. By the end of the course, students will have developed a thorough appreciation of the current methods used by hospitals and health care providers to evaluate medical outcomes, as well as those used by consumers to choose hospitals and providers.

**213. Health Care Strategy and Management: the Business of Health Care. (A)** Kimberly.

This course presents an overview of the business of health and how a variety of health care organizations have gained, sustained, and lost competitive advantage amidst intense competition, widespread regulation, high interdependence, and massive technological, economic, social and political changes. Specifically, we evaluate the challenges facing health care organizations using competitive analysis, identify their past responses, and explore the current strategies they are using to manage these challenges (and emerging ones) more effectively. Students will develop generalized skills in competitive analysis and the ability to apply those skills in the specialized analysis of opportunities in producer (e.g. biopharmaceutical, medical product, information technology), purchaser (e.g. insurance), and provider (e.g. hospitals, nursing homes, physician) organizations and industry sectors. The course is organized around a number of readings, cases, presentations, and a required project.

**215. Management and Economics of Pharmaceutical, Biotechnology, and Medical Device Industries. (B)** Danzon. Prerequisite(s): One undergraduate Health Care course or one Economics course or equivalent experience with permission of instructor.

This course provides an overview of the management, economic and policy issues facing the pharmaceutical, biotechnology, and medical device industries. The course perspective is global with emphasis on the U.S. as the largest and most profitable market. Critical issues we will examine include: R&D intensive cost structure and rapid technological change; biotechnology and genomics startups and alliances with the pharma industry; a complex global marketplace in which prices are regulated in most countries and customers include governments and insurers, as well as physicians, pharmacists and consumers now reachable through DTC; intense and evolving M&A, including mergers, joint ventures, and complex alliances; government regulation of every business function: R&D, pricing, manufacturing, and promotion; and global products and multinational firms. We use industry and Wharton experts from various disciplines to address these issues.

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**302. (ECON236) Economics and Financing of Health Care Delivery. (B)** Guy David. Prerequisite(s): ECON 001 and ECON 002 OR BPUB 250.

This course provides an application of economic principles to the health care sector. By recognizing the importance of scarcity and incentives, this course will focus on the critical economic issues in producing, delivering, and financing health care. In particular, the course will analyze determinants of demand for medical care, such as health status, insurance coverage, and income; the unique role of physicians in guiding and shaping the allocation of resources in medical care markets; and competition in medical care markets, especially among hospitals. Special emphasis will be placed on the evaluation of policy instruments such as government regulation, antitrust laws, 'sin taxes' on cigarettes and alcohol, and public health programs. This course is similar to HCMG 202, but uses more advanced quantitative methods and formal economic theory; knowledge of calculus and basic microeconomics is recommended. Students who take HCMG 302 may not also take HCMG 202, ECON 039, or ECON 236 for further credit.

**841. Health Services System. (A)**

This course provides an overview of the evolution, structure and current issues in the health care system. It examines the unique features of health care as a product, and the changing relationships between patients, physicians, hospitals, insurers, employers, communities, and government. The course examines three broad segments of the health care industry: payors, providers and suppliers. Within the payor segment, the course examines the sources and destinations of spending, managed care (HMOs, PPOs), employer based health insurance, technology assessment, payor strategy, and efforts to pay for the elderly, the poor & the medically indigent. Within the provider segment, the course examines the impact of cost containment and competition on hospitals and integrated delivery systems, long term care and disease management, and the important role of epidemiology in assessing population health needs and risks. Within the supplier segment, the course will examine developments in the biotechnology, pharmaceutical, medical devices, genomics and IT industries. NOTE: This is a required course for Wharton Graduate Health Care Management majors; it counts as an elective course for all other Wharton Graduate students. It is also open to Law School and Nursing School students with a joint Wharton Program.

Please note that during the Wharton Pre-term program, there are three additional sessions that serve as important background material for this course. The instructor presumes you know this material when the regular course begins.

**845. Managed Care and the Industrial Organization of Health Care. (B)** Burns, L.

This course, cotaught with Brad Fluegel of Wellpoint, Inc. will focus on two interrelated topics: managed care and market structure. The section on managed care will cover strategic planning and marketing of managed care services, operational issues in developing a managed care network, actuarial issues, and the management of physician behavior. The section on health care market structure will analyze strategies of vertical integration and horizontal intergration

(M+As), and their attempt to alter the balance of power in local healthcare markets. The section will also analyze the operational issues in managing cost and quality in an integrated system, integration along the supply chain, and the performance of these systems.

**849. Financial Management of Health Institutions. (A)** Scott Harrington. Prerequisite(s): Finance 601 or equivalent.

This course focuses on the application of financial analysis to financial and operating decisions in the health care industry. Valuation methods covered include: net present value of free cash flows, decision tree analysis, real options, and multiples. The cases allow students to apply these skills to examine the following types of decisions/situations: estimate the value of a drug that is being developed using both traditional NPV and option pricing; evaluate an R&D limited partnership as an alternative to traditional methods of financing biotech R&D; estimate the value of a pharmaceutical company using publicly available data; identify the best way for a new medical device company to price its products and raise funds; determine why a Medicare HMO is losing money, recommend whether the plan should remain in the market, and recommend changes in benefit design and reimbursement methods if the plan decides to remain in the market; analyze a health system's profitability by product line and discuss the implications for pure play or carve-out companies.

**852. Health Services Delivery: A Managerial Economic Approach. (C)** Professor Guy David.

This course is designed to equip students with tools to understand and analyze problems in the rapidly changing health care delivery environment. It focuses on organizational and strategic issues in the delivery of health care in the hospital context. The course is divided into eight topic areas: 1.) Shortages, substitutability and efficiency in hospitals' production, 2.) The role of nonprofit health care providers, 3.) The economics of hospitals and physicians' specialization, 4.) Inpatient vs. outpatient care delivery, 5.) Antitrust laws and regulation and their effect on hospital competition, 6.) Marketing health services, 7.) Defining and improving medical performance, and 8.) Evidence-based medicine and the diffusion of technologies. The course will feature a number of guest speakers.

**854. (HCMG211, LGST211, LGST811) Legal Aspects of Health Care. (A)** Rosoff.

This course offers a current and historical overview of the regulation of health care delivery and financing in the U.S. It examines principles and practical applications of the laws that affect the operational decisions of health care providers, payors, and managers and that impact development of markets for health care products and services. Also considered are the social and ethical issues encountered in trying to balance the interests, needs and rights of individual citizens against those of society. For part of the term, the class will divide into two groups so that students can focus on their choice of (1.) health care management (antitrust law, and regulation of the drugs and medical device industry) or (2.) selected issues of patients' rights (e.g. abortion, treatment of terminal patients, etc.)

**855. Management of Health Care for the Elderly. (A)** JOHN WHITMAN.

This mini course is designed to provide students with an appreciation of the good, the bad and the ugly of how our current health care system cares for one of our nation's most precious resources - our seniors! This course will review care provided to seniors within a variety of institutional settings (hospitals, nursing facilities, various senior housing levels) as well as outpatient and home care services. Special attention will be paid to nursing homes and senior housing options and their past, present and future role within the overall health care system in the United States. The course will start with an overview of the senior population with special attention to their health and social needs. Several classes will be held off campus at selected nursing facilities and senior housing complexes. In addition, a broad range of special programs and services will be reviewed such as sub-acute care, long term care insurance, Medicare Risk Programs, elderly housing, adult day care, managed care, Medicare Part D, case management, hospice and other recent developments. Throughout the course, emphasis will be placed on entrepreneurial opportunities to serve the senior market at all levels.

Students are required to produce a paper for this course that focuses on a specific area impacting the senior market. This is a wonderful opportunity for students to select an area of personal interest and conduct an in depth review of that area including making direct contact with national experts within the topic selected. All student topics must be approved during the first two weeks of class and the depth of research required agreed upon by the student and the instructor. Interested students not in the HCMG major are urged to speak to the instructor before enrolling in the course.

**858. Health Care Marketing. (A)** Hari Mahadevan.

This course examines key marketing issues in the pharmaceutical, biotech and medical device industries. The focus is on aspects that distinguish marketing in the pharma-biotech-device industries from general marketing in non-health care industries. After reviewing these differences, the industry evolution and current state of flux, we focus in depth on the following topics: product launch and growth, from a strategic and tactical execution perspective; regulation, direct-to-consumer advertising, and off-label usage; unique features of medical device marketing, including hospital and GPO purchasing, role of sales reps etc.; biotechnology marketing, for both niche and blockbuster products; marketing mix

optimization; global brand management. Class format includes lecture, case discussion and presentations by industry experts.

**859. (HCMG204) Comparative Health Care Systems. (A)** Danzon. Prerequisite(s): HCMG841 or similar background or experience in health care systems. MBA Course.

This course examines the structure of health care systems in different countries, focusing on financing, reimbursement, delivery systems and adoption of new technologies. We study the relative roles of private sector and public sector insurance and providers, and the effect of system design on cost, quality, efficiency and equity of medical services. Some issues we address are normative: Which systems and which public/private sector mixes are better at achieving efficiency and equity? Other issues are positive: How do these different systems deal with the tough choices, such as decisions about new technologies? Our main focus is on the systems in four large OECD countries- Germany, Canada, Japan, and the United Kingdom - but we also look at other countries with interesting systems- including Italy, Chile, and Singapore. We will draw lessons for the U.S. from foreign experience and vice versa.

**863. Management and Economics of Pharmaceutical, Biotech and Medical Device Industries. (B)**

This course provides an overview of the management, economic and policy issues facing the pharmaceutical, biotechnology and medical device industries. The course perspective is global, with emphasis on the U.S. as the largest and most profitable market. Critical issues we will examine include: R&D intensive cost structure and rapid technological change; biotechnology and genomics startups and alliances with the pharma industry; a complex global marketplace in which prices are regulated in most countries and customers include governments and insurers, as well as physicians, pharmacists and consumers now reachable through DTC; intense and evolving M&A, including mergers, joint ventures, and complex alliances; government regulation of every business function: R&D, pricing, manufacturing and promotion; and global products and multinational firms. We use industry and Wharton experts from various disciplines to address these issues.

**866. E-Health: Business Models and Impact. (B)** Spyros Stavrakas.

This course will introduce students to the main components of Health Information Technology (HIT) and how HIT currently effects and in the future, may change health care operating models. Although it will not prepare students for primary technology management positions, it will help them understand the role of HIT in the success of the provider delivery system and other important healthcare sectors. It will provide a foundation that will prepare them as managers and consultants to rely upon or manage information technology to accomplish their objectives. The course will give special attention to key health care processes, topics and sectors such as HIT and the drive for provider quality and cost improvements, the value of patient-centric and other databases for manufacturing marketing and product development, the growth of new information technologies for consumer directed healthcare, the strategies and economics of individual HIT enterprises and the role of government. The course relies heavily on industry leaders to share their ideas and experiences with students.

**867. (MGMT847) Health Care Entrepreneurship. (B)** Gary Kurtzman and Jeff Libson.

The course focuses on the creation, funding, and management of biotechnology and health services enterprises. The course is designed to supplement other offerings in the Health Care Systems and Management Departments for those students with entrepreneurial interest in such ventures, and will focus on special issues surrounding the conceptualization, planning, diligence and capitalization, launch, compensation and management of these ventures. In addition, course offers methods for self-assessment & development of business models and plans, techniques for technology assessment and strategy, develops foundation for capitalization and partnering strategies, and creates a basis for best practices in company launch and plan execution.

**868. Private Sector Role in Global Health. (B)** Stephen Sammut.

This ASP will seek managerial solutions to international health issues and health issues within developing countries using private enterprise or other private initiatives, or public-private partnership approaches to issues of health services, development of products such as therapeutics, vaccines or devices, or other mechanisms or businesses that advance health. The course goal is not to duplicate a conventional international public health course, but to build upon what is conventionally known and taught in such courses from a managerial solutions-oriented perspective. Discussion and reading will address a range of means of managing medical services and related businesses -public and private-in underserved areas for populations in emerging markets, developing countries, and underserved areas in developed nations.

**890. Advanced Study Project: Management of Health Care Service Businesses. (A)** Doug Present.

This course examines issues related to managing or investing in Health Care Services Businesses. Defined as companies that manage, distribute or provide health care services, the Health Care Services sector touches almost every other portion of the health care system. We will study the key management issues related to a number of different health care services businesses with a focus on common challenges related to reimbursement, regulatory, margin,

growth and competitive issues. We will make extensive use of outside speakers all of whom will be current industry leaders within different sectors of the health care services industry and will address the current management issues they face in running their businesses. Students will then be asked to develop a plan to both buyout and subsequently manage a specific health care services business. Students will then present their plans to a panel of leading Health Care Private Equity investors.

#### **996. Dissertation Abroad.**

#### **Ph.D. Seminars**

##### **900. Proseminar in Health Services Research. (C)** Professor Scott Harrington.

This seminar will explore empirical methods in health care research with an emphasis on applications in health care economics and finance. The methods covered include estimation with panel data, program evaluation models, qualitative and limited dependent variable models, stochastic frontier models, estimation with count data, and duration models. The readings consist of a blend of classic and recent empirical studies, including articles on the demand for health care and health insurance, tests for moral hazard and adverse selection, and estimation of provider cost functions. Students are required to conduct an econometric analysis of some issue within the health care field. With the permission of the instructor, the seminar is open to doctoral students from departments other than Health Care Systems.

##### **SM 901. Seminar in Health Care Cost Benefit and Cost Effectiveness Analysis. (A)** Professor Mark Pauly.

The purpose of this doctoral level course is to investigate the theory and practice of cost-benefit and cost-effectiveness analysis as applied to health care. The three techniques to be examined are cost-effectiveness analysis with single dimensional outcomes, cost effectiveness analysis with multiple attributes (especially in the form of Quality Adjusted Life Years), and economic cost-benefit analysis. Valuation of mortality and morbidity relative to other goods will be emphasized. Students will be expected to develop written critiques of articles in the literature, and to design a new application of one of the techniques as a term project.

##### **903. (HCMG844) Economics of Health Care and Policy.** Professor Guy David.

This course applies basic economic concepts to analyze the health care market and evaluate health policies. The course begins with an analysis of the demand for health, the derived demand for medical care and the demand for health insurance. The second part of the course examines the supply of medical care by physicians and hospitals, medical technology, and the role of managed care organizations. The implication of adverse selection, moral hazard, externalities, and asymmetric information will be explored. The third part of the course examines the rationale for government intervention in medical markets as well as the effectiveness and efficiency of various health policies, including: Medicare, Medicaid, price regulation of hospitals, physician payment reform, medical malpractice, uncompensated care, and physician manpower planning.