The following is an outline of the main topics covered in this course:

I. Introduction
   Warm-up exercise: Investment and pricing decisions in health care: Merck Gardasil case
   
   What price should Merck set for its new vaccine (Gardasil)?
   Should a firm develop a vaccine or a drug?

II. Health insurance
   Risk aversion and the social benefits of health insurance; optimal insurance coverage
   Moral hazard and the social costs of health insurance
   Asymmetric information, adverse selection, and private health insurance market failures; potential remedies
   Choice among health plans: health insurance benefit design (optimal premium and copayment structure)
   
   Empirical evidence about the impact of health insurance on the use of medical care

III. Measuring and valuing health: the quantity, price, and quality of life-years
   Longevity, the “quantity” of life-years
   Alternative indicators: life expectancy, premature mortality, cancer survival rate, etc.
   
   Explaining interstate and international variation in longevity growth
   The “price” (value) of life-years: How much should we pay to save a “statistical life”? 
   Three alternative approaches: human capital approach, “full income” approach, and compensating differentials approach
   The “quality” of life-years: Is average quality of life likely to be improved by advances in medicine?

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IV. Comparative effectiveness, cost effectiveness, and health technology assessment

How cost-effective are new cancer drugs in the U.S.?
Medicare’s attempt to equalize the cost-effectiveness of 2 drugs

V. Physician behavior: effects of payment system, medical malpractice regime, and information

Alternative ways of paying doctors and other providers:

- Retrospective payment; how do physicians respond to fee changes?
- Prospective payment; the risk of “upcoding”
- Value-based payment: theory, and a case study of incentives in HMOs

Effect of medical malpractice regime on physician behavior: Do doctors practice defensive medicine?

Is more information better? The effects of “report cards” on health care providers

VI. Pharmaceutical industry

Intellectual property, innovation and imitation

- Patents: benefits and risks—a simple model
- Does patent protection restrict U.S. drug use?

Drug development and pricing decisions

- Is transparency of prices of medical goods (e.g. drugs) and services desirable?
- Multiple markets and price discrimination

Precision medicine and pharmacogenomics

Medication adherence
Assignment and Coursework Structure. The course will be taught using a combination of case discussions and lectures, including a few guest lectures. Students will be evaluated on the basis of class participation (20%), several homework assignments (20%), and a final exam (60%).

Connection with the core. The learning in this course will utilize, build on, and extend concepts covered in the following core courses:

| MANAGERIAL ECONOMICS | • Maximization and thinking on the margin  
|                       | • Analyzing complex decision-making under uncertainty  
|                       | • Pricing with market power  
|                       | • Market segmentation and other advanced pricing strategies  
|                       | • Understanding market competition and equilibrium thinking (in the short run)  
|                       | • Market equilibrium thinking (in the long run) and barriers to entry  
|                       | • Strategic interaction among firms  

| CORPORATE FINANCE | • Risk (health insurance)  
|                   | • Incremental cost/benefit (of medical expenditure)  

| GLOBAL ECONOMIC ENVIRONMENT I | • GDP (as an incomplete measure of economic prosperity)  

Student focus: Students who plan to work in any of the following segments of the health care field should find this course to be valuable:
- pharmaceutical, biotechnology, and medical device companies
- health insurance companies and managed care organizations
- hospitals and physician practices
- financial services focused on health care
- public and not-for-profit organizations focused on health care

Core culture. This course adheres to Columbia Core Culture. Students are expected to be:
- Present: (1) On time and present for every session; (2) Attendance tracked
- Prepared: (1) Complete pre-work needed, expect cold calling; (2) Bring nameplates and clickers
- Participating: (1) Constructive participation expected and part of grade; (2) No electronic devices unless explicitly called for by the instructor