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EXPANDED PROGRAM UPDATED for APRIL 2006 P.E. EXAM

Why should you enroll in the
Hofstra Professional Engineering Review Program?

While Hofstra University cannot guarantee that you will pass the New York State Professional Engineering Examinations by taking its program, it can state that of those registrants who have taken the courses and the New York State Professional Engineer's License Examinations, 87 percent have been successful in Part A and 82 percent in Part B during the 41 years that the program has been offered. If you are serious about obtaining your professional engineer's license, Hofstra can assure you, based on a long history of success, that the likelihood of your being successful in this goal is measurably increased by enrollment in the Hofstra Professional Engineering Review Program and diligent work on your part in home study and solution of typical problems. The Professional Engineering Review Program will help you to formulate your notes, refresh your memory in areas of engineering little utilized over past years, and most important, assist you in an orderly study program to prepare for the New York State Professional Engineer's License Examinations. In addition, during the program you will receive necessary New York state application forms as well as guidance in their proper completion.

HOFSTRA UNIVERSITY also offers ABET-accredited ENGINEERING DEGREE PROGRAMS.

HOFSTRA UNIVERSITY™

UNIVERSITY COLLEGE FOR CONTINUING EDUCATION

PROFESSIONAL ENGINEERING Review Program

For New York State Professional Engineer's License Examinations, April 2006

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PART A
Engineering Fundamentals—General

PART B
Principles and Practice of Engineering
Civil, Electrical and Mechanical

The Hofstra program has been reviewed and approved by the PRACTICING INSTITUTE OF ENGINEERING and the Nassau County Chapter, NYSSPE. The program is also registered with the New York State Education Department and is approved for the training of veterans.

CONTENT OF PROFESSIONAL ENGINEERING *REVIEW PROGRAM*

P.E. PART A: ENGINEERING FUNDAMENTALS—GENERAL—10.8 C.E.U. (28 sessions) Course Code E0961-01—$955

The review course for Part A consists of 108 hours of study of basic theory and solution of typical problems in engineering fundamentals taken from previous examinations and described in detail as follows:

Dynamics—Kinematics and kinetics; impulse, impact and momentum; work-energy of particles and rigid bodies; relative motion, including Coriolis acceleration; conservation of energy and conservation of momentum; Newton's Laws.

Mechanics of Materials—Shear and moment diagrams; stress and strain; basic theory of elastic and inelastic flexure and buckling; design of beams and columns, torsion of circular members, structural deflections, indeterminate problems in tension and compression.

Electrical Theory—AC and DC circuits; network theorems and techniques, transformers, diode applications, capacitance and inductance, operational amplifiers, electrical and magnetic fields.

Engineering Economics—Annual cost, break-even analysis, benefit cost analysis, future worth or value, present worth, risk analysis, rate-of-return analysis, tax considerations, valuation and depreciation, accelerated cost recovery systems, double declining balance method.

Thermodynamics—Properties, First and Second Law analysis, gas and vapor cycles, chemical reactions, flow processes, mixtures of gases, heat transfer.

Chemistry—Fundamentals of chemistry, properties of the commoner elements and their compounds, rate of reaction and chemical equilibrium, solutions and colloids, oxidation and reduction.

Mathematics—Analytic geometry, differential and integral calculus, differential equations, linear algebra, Laplace transforms, probability and statistics, vector analysis.

Statics—Force, moment, determination of resultants; equilibrium—free body diagram—determination of reactions; conditions of stability and equilibrium; controids and moments of inertia; stress resultants; analysis of simple trusses; friction.

Fluid Mechanics—Kinematics and dynamics of fluid flow, hydrostatics, similitude and dimensional analysis.

Materials Science • Structure of Matter • Examination Skills• Ethics • Computers

Videotapes on engineering fundamentals are available for registrants to supplement lectures.

P.E. PART B: PRINCIPLES AND PRACTICE (15 sessions)

To reflect recent changes in the New York state engineering examinations, which limit the candidate to choose problems from only one major field of engineering, the following three courses devoted to Civil, Electrical, and Mechanical Engineering will be offered. Each course consists of 56 hours of study devoted to the specialty area and 4 hours to engineering economics as hereinafter described.

With the introduction of the "breadth" and "depth" multiple choice examinations, each registrant is advised that each of the Part B engineering specialty courses prepares the engineer only for the morning "breadth" examination. Additional individual study and preparation is required of each registrant to prepare for the afternoon "depth" examination.

Engineering Economics—A review of the following topics: discrete and continuous compound interest; comparison of simple and complex alternate proposals, including replacement decisions, by means of rate-of-return, present worth and annual cost comparisons; income tax considerations; comparison of depreciation methodology; minimum cost and break-even analysis; and handling risk by statistical means.

P.E. B CIVIL ENGINEERING—6.0 C.E.U. Course Code E1021-01—$955

A review devoted to design of beams and columns; analysis of statically indeterminate structures; reinforced concrete design; hydraulics—fluid flow in pipes and open channels; transportation and highway engineering; environmental engineering—water supply and waste water treatment; and miscellaneous topics in soils and foundations. Latest A.I.S.C., A.C.I. and N.D.S. specifications used throughout course.

Videotapes on civil engineering are available for registrants to supplement lectures.

P.E. B ELECTRICAL ENGINEERING—6.0 C.E.U. Course Code E1031-01—$955

A review devoted to DC, AC and three-phase circuit analysis; diodes and transistors; amplifiers and oscillators; filters; transient analysis; transmission lines and the Smith chart; AC and DC machinery; control systems; digital and analog computer circuits and systems; communication systems; power systems.

P.E. B MECHANICAL ENGINEERING—6.0 C.E.U. Course Code E1041-01—$955

A review devoted to heat transfer; power plants; air conditioning and refrigeration; gas dynamics and propulsion; machine design; vibrations; pressure vessels and miscellaneous topics in mechanical design, energy and control systems, and thermal and fluid processes.

A knowledge of basic principles on the part of the student is assumed in each of the Part B—Principles and Practice of Engineering, and the preceding distribution of hours into specific specialties should be considered tentative.

RECENT CHANGES IN PROFESSIONAL ENGINEERING EXAMINATIONS

In 1970 the New York State Board of Examiners of Professional Engineers and Land Surveyors adopted the Uniform Examinations of the National Council of Examiners for Engineering and Surveying (NCEES). The examinations will be given October 28 and 29, 2005, and April 21 and 22, 2006, to conform to the schedule of the NCEES. Part A, constituting the intern engineer portion of the examination, is divided into two 4-hour sessions devoted to engineering fundamentals. The morning session of Part A is a multiple choice examination on mathematics, chemistry, statics, dynamics, mechanics of materials, fluid mechanics, thermodynamics, electrical circuits, engineering economics, materials science, structure of matter, computers and ethics. The afternoon portion of the Fundamentals examination is given in six engineering areas: **general, chemical, civil, industrial, electrical and mechanical. The review course at Hofstra is specifically tailored to only the general exam and covers exactly the same subject areas as the morning session, to avoid studying and preparing for two examination areas.** Part B consists of two 4-hour sessions on principles and practices of engineering in each of four major engineering fields: chemical, civil, electrical and mechanical. The candidate may answer problems from only one major field. Economics may be included in any problem in any specialty area. While all parts are corrected by NCEES, Part A is currently machine-scored. The only reference material permitted for Part A is supplied to the candidate on the day of the exam. Although Part B is still open book, both the morning "breadth" examination and the afternoon "depth" examination are multiple choice and are machine scored.

PURPOSE OF THE PROFESSIONAL ENGINEERING REVIEW PROGRAM

The primary purpose of this program is to provide an adequate review and preparation for all parts of the revised Professional Engineer's licensing examinations. The courses are designed for the **Uniform Examinations** of the National Council of Examiners for Engineering and Surveying (NCEES), recently adopted by the New York State Board of Professional Engineers and Land Surveyors. These courses are available to persons who qualify under New York State Education Law requirements to take the April 2006 examinations. No degree credit is granted for these courses; however, Continuing Education Units (C.E.U.) are given.

THE PROFESSIONAL ENGINEER

The "professional engineer," as defined by recent changes in the New York State Education Law, is a person who is licensed to practice engineering and defined as performing professional services such as consultation, investigation, evaluation, planning, design, or supervision of construction or operation, in connection with any utilities, structures, buildings, machines, equipment, processes, works, or projects, wherein the safeguarding of life, health and property is concerned or involved, when such service or work requires the application of engineering principles and data. To practice as a professional engineer, New York state, together with all other states of the Union, requires a license. It is unlawful for any person to practice or to offer to practice the profession of engineering unless duly licensed. To become duly licensed, a person is required to pass a two-part series of professional engineering examinations in addition to satisfying engineering education and experience requirements. Passing of Part A qualifies a person as an intern engineer.

DO YOU QUALIFY?

The Part A "Fundamentals of Engineering" examination may be taken after graduation from an approved engineering degree program. The Part B "Engineering Specialties" examination may be taken after an additional four years of acceptable engineering experience.

Part A may also be taken if the applicant has completed six years of engineering education/experience. Twelve years of education/experience are required for Part B. The education/experience credit for each part may be satisfied with various combinations of education and experience. Each calendar year completed in an ABET or equivalent engineering degree program is given two years of education/experience credit to a maximum of eight years, whereas each calendar year completed toward a regionally accredited engineering degree or an ABET or equivalent engineering technology degree is also given two years' education/experience credit, but limited to a maximum of six years. The filing deadline for the April 21 and 22, 2006, New York State Professional Engineering examinations is November 1, 2005.

REGISTRATION

Call: (516) 463-5993

Mail: Complete the registration form and mail with payment to University College for Continuing Education, 250 Hofstra University, Hempstead, NY 11549-2500.

Web: www.hofstra.edu/professionalengineering.

Fax: Fax completed registration form with credit card information to (516) 463-4833.

In person: Visit University College Hall Monday-Thursday, 9 a.m.-7:45 p.m. or Friday 9 a.m.-5 p.m. Please bring check, money order or credit card as University College does not accept cash. Call (516) 463-5993 for directions.

Late registration will take place for two weeks after each course begins. The fee for each course is $955. Registrants who have already taken Part A at Hofstra University receive a $100 discount for Part B. Reduced fees are offered to members of the sponsoring organizations indicated on the registration form. **Many firms reimburse fees if the applicant passes the examination.**

COURSE SCHEDULES

To provide a mutually convenient time for engineers in industry, courses are offered Saturdays, 8:30 a.m. to 12:30 p.m. (4 hours per class). P.E. A and P.E. B are given concurrently and cannot be taken during the same year.

Registrants will be notified of room assignments. **P.E. A begins September 17, 2005, and P.E. B begins December 3, 2005**.

FACULTY

Ronald J. Alvarez, B.C.E., M.S. in C.E., Ph.D.; Program Director Professor of Engineering, Hofstra University; Registered Professional Engineer, New York; Certificate of Qualifications, National Council of Examiners for Engineering and Surveying.

Anthony M. Agnone, B.S., M.S., Ph.D.; Associate Professor of Engineering, Hofstra University; Registered Professional Engineer, New York.

Craig Capria, B.S., M.S.; Associate Professor of Engineering, Nassau Community College; Registered Professional Engineer, New York.

Paul Grosser, B.E., M.E., Ph.D.; President, P.W. Grosser Consulting; Registered Professional Engineer, New York.

Peter Healy, B.S.C.E., M.S. in C.E., M.B.A. (Finance); Registered Professional Engineer, New York.

Margaret Hunter, B.S., M.S., Ph.D.; Assistant Professor of Engineering, Hofstra University.

Richard A. Jensen, B.E., M.S., D.Sc., Associate Professor of Engineering, Hofstra University; Registered Professional Engineer, New York.

John Liguori, B.S., M.S.; Registered Professional Engineer, New York

Thore Omholt, B.S., M.S., Ph.D.; Associate Professor, State University of New York Maritime College.

Richard Puerzer, B.S., M.S., Ph.D.; Assistant Professor of Engineering, Hofstra University.

Manush Raship, B.E., M.E., Engr.Sci.Dr.; Adjunct Associate Professor of Engineering, Hofstra University.

Timothy Tweedy, B.C.E., M.S.C.E.; Assistant Professor of Civil Engineering, Nassau Community College; Registered Professional Engineer, New York.

Further information
may be obtained by contacting:

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E-MAIL: uccelibarts@hofstra.edu
www.hofstra.edu/professionalengineering

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Refund and Withdrawal Policy

Due to small class sizes, no refunds will be given for any reason after attendance at the first class meeting of any course in the Professional Engineering Review Program. However, if a course is canceled due to insufficient enrollment, a full refund will be given to each registrant. All withdrawal requests must be in writting, and received by the University College office no later than two business days before the class begins.

REGISTRATION: Mail to: **University College for Continuing Education, 250 Hofstra University, Hempstead, NY 11549-2500. Fax To: (516) 463-4833** **M-3-79**

Have you previously taken Hofstra Professional Engineering Review Courses? ❑ Yes ❑ No

Print Name (Last) (First) Company Name Title/Position

Address Company Address (or emergency contact person)

City State Zip Company Contact Person Phone No. ( )

Day Phone ( ) Evening Phone ( ) E-mail Address

Check Discount Requested: Only one permitted; must be applied at time of registration.

❑ $100 discount for P.E. B since P.E. A taken at Hofstra in _____ (year)

❑ $50 for Hofstra alumni Year _____ Degree _____ Major _____

❑ $50** only for current members of NYSSPE ❑ ASCE ❑ ASME ❑ CEC ❑ APWA ❑ ASHRAE ❑ LISOA ❑ ISA ❑ IIE ❑

TECHNICAL SOCIETY _____ MEMBERSHIP NO. _____

****INFORMATION MUST BE PROVIDED IN ORDER TO QUALIFY FOR REDUCED FEE**

❑ Please send information on HOFSTRA UNIVERSITY ENGINEERING DEGREE PROGRAMS.

Course Code	Title of Course		Tuition	955	00
			Discount		
			Payment		
			Total		

Method of Payment: ❑ Check payable to Hofstra University

❑ MasterCard ❑ Visa Expiration Date_____

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Signature_____ Date_____