

TOTAL EXAMINATION PROGRAM
PEO Syllabus of Examinations, 2008 Edition

NUCLEAR ENGINEERING

INTRODUCTION

A full set of Nuclear Engineering examinations consists of the following, three-hour examination papers and an engineering report. Candidates will be assigned examinations based on an assessment of their academic background. Examinations from discipline syllabi other than those specific to the candidates' discipline may be assigned at the discretion of PEO's Academic Requirement Committee.

BASIC STUDIES EXAMINATIONS

04-BS-1	Mathematics
04-BS-2	Probability and Statistics
04-BS-3	Statics and Dynamics
04-BS-4	Electric Circuits and Power
04-BS-5	Advanced Mathematics
04-BS-6	Mechanics of Materials
04-BS-7	Mechanics of Fluids
04-BS-8	Digital Logic Circuits
04-BS-9	Basic Electromagnetics
04-BS-10	Thermodynamics
04-BS-11	Properties of Materials
04-BS-15	Engineering Graphics and Design Process
04-BS-16	Discrete Mathematics

PROFESSIONAL EXAMS – SPECIFIC TO NUCLEAR ENGINEERING

GROUP A

08-Nuc-A1	Introduction to Nuclear Physics and Nuclear Engineering
08-Nuc-A2	Nuclear Reactor Analysis
08-Nuc-A3	Nuclear Reactor Design
08-Nuc-A4	Reactor Safety and FMEA (Failure Mode and Effects Analysis)
08-Nuc-A5	Nuclear Detection and Instrumentation
08-Nuc-A6	Nuclear Power Plant Systems and Operation
08-Nuc-A7	Process Dynamics and Control

GROUP B

08-Nuc-B1	Nuclear Shielding
08-Nuc-B2	Radiation Protection
08-Nuc-B3	Fuel Management / Fuel Design
08-Nuc-B4	Waste Management
08-Nuc-B5	Nuclear Plant Chemistry
08-Nuc-B6	Nuclear Materials
08-Nuc-B7	Reactor Control
08-Nuc-B8	Applied Thermodynamics and Heat Transfer
08-Nuc-B9	Energy Conversion and Power Generation
08-Nuc-B10	Advanced Fluid Mechanics
08-Nuc-B11	Power Systems and Machines
08-Nuc-B12	Power Systems Engineering

COMPLEMENTARY STUDIES

11-CS-1	Engineering Economics
11-CS-2	Engineering in Society – Health & Safety
11-CS-3	Sustainability, Engineering and the Environment
11-CS-4	Engineering Management
3.2	Engineering Report