

MAINE MARITIME ACADEMY

A College of Engineering, Management, Science, and Transportation

Adjunct Engineering Instructors – Fall 2017

POSITION OVERVIEW

This document describes duties that the Academy expects of adjunct faculty members. Adjunct faculty are non-permanent, temporary faculty who are hired on a semester by semester basis.

TEACHING

Teaching responsibilities include time spent in the classroom, laboratory, or training ship(s) and in immediate preparation for these; maintaining and improving competence in subjects being taught; preparing contemporary teaching materials; conferring with students on course materials; directing individual and group studies and practica; reviewing written examinations and papers; evaluating presentations; supervising independent study projects, supervising or teaching clinical cooperatives or industry programs, and assigning grades according to existing Academy policy.

OTHER ASPECTS OF FACULTY PERFORMANCE

Collegiality, as well as professional and ethical conduct, enhances teaching, learning and the general reputation of all persons in the academy. Therefore, all faculty members are expected to serve in a collegial fashion and in accordance with professional and ethical principles when dealing with other faculty members, students, administrators, and members of the public.

DUTIES

- Teach at undergraduate and graduate level in areas allocated by the Department Head and reviewed from time to time by the Department Head.
- Contribute to the development, planning and implementation of a high quality curriculum.
- Assist in the development of learning materials, by preparing syllabus and lesson plans and maintaining records to monitor student progress, achievement and attendance.
- Participate in the development, administration and marking of exams and other assessments.
- Provide advice and support to students.
- Inform students of their progress by promptly returning assignments, quizzes, papers and exams
- Office Hours required per week: Varies by assignment, typically 2-3 for an adjunct teaching 12 credits or more.
- Maintain an awareness and enforce fire and health and safety regulations applicable to the teaching location.

ESSENTIAL SKILLS

- Teaching and other forms of public presentation.
- Proven record of ability to supervise academic work by undergraduates or masters students.
- Proven record of ability to manage time and work to strict deadlines.
- Ability to write clearly and tailor communication style to meet the needs of the recipient.
- Ability to work collaboratively.
- Commitment to high quality teaching and fostering a positive learning environment for students
- Commitment to MMA's policy of equal opportunity and the ability to work harmoniously with colleagues and students of all genders, cultures and backgrounds
- Excellent interpersonal, organizational and communication skills are essential
- Ability to maintain composure in stressful situations
- High degree of professionalism
- Demonstrated integrity and ability to maintain confidentiality

MINIMUM QUALIFICATIONS

- Bachelor's degree or higher from an accredited institution or the highest degree appropriate in a relevant field of specialization.
- Candidates must have a 3 years minimum industrial experience in their appropriate industry.
- Prior successful teaching/training experience desired.
- Membership in relevant professional organization(s).
- Applicable professional license(s).
- Normally will have produced creative work, professional writing or research in refereed and other professional journals, and be a recognized authority in the field of specialization. Must meet Academy criteria for appointment to the rank of Assistant/Associate/Full Professor.

SPECIAL CONDITIONS

- Background check is required
- Tobacco-free campus.
- Must present original copies of transcripts

COURSES/POSITIONS AVAILABLE

EG372 : Electrical Power II — Builds on EG/ES371 to develop an understanding of design, construction, operational characteristics, efficiency and maintenance of DC and single- and 3-phase AC machinery, and pulse-width modulation (PWM) and its applications to propulsion and industrial drives. Lab work will emphasize principles of safe and efficient operation, troubleshooting, and installation of electrical machinery and systematic use of measuring equipment. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisites: MS110 or MS150, ET371 or ES371, PS102 or PS162, CE203 or CO200. Rec. 2, Lab. 2, Cr. 3.

4 sections needed – One lecturer each section - Typical Class Size 32

ET452 : Technical Communications — Extension of the theory and practice of communications tasks of a working engineer or technologist, including engineering proposals and reports; mechanism and process description; instructions, accident or casualty reports; technical specifications; and progress reports. Application of effective visual aids to both oral and written communications will be emphasized. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Rec. 3, Cr. 3.

Four sections needed – One lecturer per section - Typical Class Size 20

EG372 : Electrical Power II LAB— Builds on ET/ES371 to develop an understanding of design, construction, operational characteristics, efficiency and maintenance of DC and single- and 3-phase AC machinery, and pulse-width modulation (PWM) and its applications to propulsion and industrial drives. Lab work will emphasize principles of safe and efficient operation, troubleshooting, and installation of electrical machinery and systematic use of measuring equipment. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisites: MS110 or MS150, ET371 or ES371, PS102 or PS162, CE203 or CO200. Rec. 2, Lab. 2, Cr. 3

Eight lab sections – Eight leads and four assistants needed – Typical Class Size 26

EG234 : Power Equipment Lab — An introduction to marine and stationary power plant systems and equipment through study, inspection, and maintenance applications. Topics include lubrication and lube oil purification systems; pumps; air removal equipment; and heat exchangers; piping systems and valves; control systems for temperature, pressure, and flow; compressed air systems; distilling plants; and auxiliary steam turbines. In addition, basic equipment techniques and tag-out safety procedures are introduced. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisite: EG101. Lab. 3, Cr. 2.

Five sections– Typical Class Size 16

ET201L : Fluid Power Lab— An introduction to applied fluid mechanics, including properties, hydrostatic pressure, flow and pressure, flow and pressure measurements, forces on areas, continuity equation, Bernoulli and general energy equations, analysis of piping systems for losses, and pump selection. These principles are applied to a variety of typical engineering problems in fluid systems. This course is designed to develop each student’s ability to analyze engineering problems. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisites: MS101 and CS150 (or equivalent). Rec 2, Lab 2, Cr. 3

Nine sections needed – 9 leads needed, 6 assistants needed – Typical Class Size 16

EG481L : Marine Refrigeration & Air Conditioning Lab— Refrigeration processes encountered in the marine field and industry. Includes the design, operation, and maintenance of the principal refrigeration cycle components, reciprocating and rotary centrifugal compressors, and the refrigerants used. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisite: ET211 or ES201 Rec. 2, Lab. 1, Cr. 2.5.

Nine sections needed – 5 leads needed, 9 assistants needed – Typical Class Size 12

ET101 : Graphics — Study and practice in lettering, use of tools, methods of geometric construction, multiview projection, orthographic representation, and delineation applied to marine technology and engineering. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Rec. 2, Lab 2, Cr. 3.

EG101: Fundamentals of Engineering Operations — A study of basic mechanical power generation systems, with emphasis on the applicable technologies and their safe and efficient management. The course is designed to introduce both engineering and non-engineering students to operating engineering. The course provides a foundation for many engineering department courses. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Rec. 3, Cr. 2.

Five sections needed – One lecturer per section – Typical Class Size 32

LabEG491 : Diesel Power III — A review of marine diesel engines of all types including the design, operation and maintenance, indicator card analysis, and emergency repair of large diesel engines. Prerequisite: EG392. Rec. 2, Lab. 2, Cr. 3.

One section needed

EG350 - Intro to Environmental Regulations & Ethical Industrial Compliance — This course is designed to develop each student's ability to recognize and effectively deal with compliance issues and professional ethics associated with environmental permitting procedures. The course will include an introduction to environmental science with a focus on defining standards pertaining to all aspects of pollutants, emissions, control technology, and enforcement. The course will consist of three primary areas: air quality, water quality including ballast water, and hazardous waste. Prerequisites: CH301. Rec. 3, Cr. 3.

Two sections needed – typical class size 32

EG321 - Steam Turbines - A study of the elementary principles, descriptive classifications, and construction and accessories of various types of marine, stationary, and auxiliary turbines. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisite: ET211 or ES251 or ES201. Rec. 3, Cr. 3.

One section needed – typical class size 32

ET491 : Marine Engineering Technology Capstone I - A course in which the student, individually, applies his/her knowledge of engineering operations and engineering science to a project that gathers and interprets information from an operating power plant (marine or stationary). Upon completion of the project, the student will be required to defend a written summary. This project will incorporate elements of the MET curriculum to develop student competence in technical and non-technical skills to solve problems. This course may require the student to work as part of a team to collect data and/or other information to support their individual project, as well as the team project that is part of MET Capstone II. Prerequisites: CE203, EG372, and ET211. Rec.1, Cr. 1

Two sections needed – One lecturer each section – Typical Class Size 32

CLOSED ET401 - Automation and Control - A study of principles and hardware for control and automation systems as applied to processes in marine and shoreside power plants. Media studied include pneumatic, hydraulic, mechanical, and electrical/electronic. This course supports the marine license program requirements to meet the Standards for Training, Certification and Watchkeeping (STCW). The course may have embedded assessment requirements that must be completed in addition to the class requirements. Prerequisites: EG372, CE203 or CO200 or CO201 or CO203. Rec. 3, Cr. 3.

Five sections needed – typical class size 32
