

MAINE MARITIME ACADEMY

A College of Engineering, Management, Science, and Transportation

Adjunct Engineering Instructors – Spring 2018

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.
- * Preferred but not required for: lab assistant, EG242, EG252, ET101, ET399 positions.

SPECIAL CONDITIONS

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

COURSES/POSITIONS AVAILABLE

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.

One three-hour lab per week - Two instructors (lead, assistant) per lab - Typical Class Size 16

Class is held on Friday from 1:00 - 3:50

One Lead Instructor needed - Compensation = \$1,447.5/section

EG242 : Machine Tool Practices — An introductory course in machine tool practices for Power Engineering Technology students. This course is designed to give students the basic theory and practical application necessary to work with and supervise the operation of machine tools and associated equipment such as engine lathe, milling machine, drill press and precision measuring and layout tools. PET students may take EG252 in place of this course and also apply EG252 toward the PET Free Elective requirement. Rec. 1, Lab. 0, Cr. 1.

One 1-hour lecture per week (Monday at 1PM)- One instructor per lecture - Typical Class Size 32

One instructor section needed - Compensation = \$985/section

EG252 : Machine Tool Operations I - An introductory course in machine tool practices. This course is designed to give students the basic theory and practical application necessary to operate

machine tools and associated equipment such as engine lathe, milling machine, drill press, precision measuring and layout tools. 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. 1, Lab. 3, Cr. 2 .5.

One 4-hour lab per week – Two instructors (lead, assistant) per lab - Typical Class Size 24

One assistant instructor section needed (Wed 12-3:50) - Compensation = \$1,970/section

EG498 : Power Engineering Operations Capstone II LAB— The course will develop concepts of power plant operations, which build on previous PEO curriculum material. This will include combined cycle power plant operations and technologies, environmental considerations, professional ethics and current topics of interest in the power generation industry. This course is a communications intensive course. Prerequisite: EG497. Rec. 3, Lab. 2, Cr. 4.

One 2-hour lab per week – Two instructors (lead, assistant) per lab - Typical Class Size 9

Two assistant instructor sections needed - Compensation = \$985/section

EN232: Pollution Control and Remediation - This course provides an introduction to pollution control (regulations and environmental effects), wastewater treatment, oil spill containment, spill response, recovery and beach/soil remediation, on-shore spill response and soil remediation, and process control specifically (but not exclusively) related to marine transportation and power plants. Course will include related environmental health and safety component. Course will include hands-on lab components for sample testing, site monitoring, site visits and coordinate with local facilities and State or Federal regulators. Prerequisites: EN202. Rec. 2, Lab. 2, Cr.3

The course will be taught by two different instructors, with this adjunct position covering the following topics over a seven-week period: water pollution control standards, regulations and environmental effects; major wastewater pollutants, personal health and safety; common wastewater treatment processes; marine MSD, licenses, certifications, and forms; municipal systems; industrial and pretreatment systems.

Two one-hour lectures per week. One instructor per lecture section - Typical Class Size 24

One 2-hour lab per week – Two instructors (lead, assistant) per lab - Typical Class Size 16

One lecture instructor and one lab lead instructor needed for first half of the semester.

Compensation = \$1,970

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.

Two two-hour lecture/lab per week - One lecturer per lab - Typical Class Size 20

Two lecturer sections needed - Compensation = \$2,955/section

ET362 : Nature and Properties of Materials LAB— This course introduces materials used in engineering applications along with guidelines for determining the appropriate materials for a given application. It also introduces fundamental science that determines the properties of materials, such as bonding types and atomic/molecular structures. Mechanical and physical Table of Contents Page | 212 properties of materials will be examined in the lectures and in laboratory exercises. Includes standard experimental techniques, mechanical and computerized data acquisition and analysis, and report writing. Communications intensive. Prerequisites: CH301, ET230, and ET452. Rec. 2, Lab. 2, Cr. 3.

One 2-hour lab per week – Two instructors (lead, assistant) per lab - Typical Class Size 16

Two lead instructor sections needed - Compensation = \$985/section

ET371 : Electrical Power I LAB — Extension of electromagnetic principles to AC and DC circuits, including balanced three-phase AC, and their application to the analysis of DC and AC circuits. Includes meters, transformers, batteries, and three-phase AC. Introduction to practical operation of shipboard and industrial electrical systems. 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: PS201 or PS261. Rec. 3, Lab. 2, Cr. 4.

One 2-hour lab per week – Two instructors (lead, assistant) per lab - Typical Class Size 16

Four assistant instructor sections needed - Compensation = \$985/section

ET378 : Computer Applications For Power — A practical study of typical engineering software used in industry. Examples include the use of spreadsheet for economic studies, computer aided drafting, power plant controls, moving data from one analysis to another, and special topics chosen by the instructor. Prerequisite: CS150. Rec. 2, Lab. 3, Cr. 3.

Two 1.5-hour lectures/labs per week - One lecturer per lab - Typical Class Size 20

One lecturer section needed - Compensation = \$2,955/section

ET399 : Special Topics in Engineering Technology : Solid Modeling — An upper-level course in engineering technology and related topics. The course will include the development of individual solid models and assemblies using Solid Works software, with emphasis on the production of associated machine shop drawings, rapid prototyping, and design for manufacturing. Prerequisites: ET101, Rec. 1.5, Lab. 1.5, Cr. 2.

Two 1.5-hour lectures/labs per week – One instructor per lecture - Typical Class Size 20

One instructor section needed - Compensation = \$1,970/section

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.

Three 50 minute lectures each week – One lecturer per section - Typical Class Size 16

Two lecturer sections needed - Compensation = \$2,955/section

ET492 : Marine Engineer Technology Capstone II — A course in which the student, as part of a team, applies his/her knowledge of engineering operations, engineering science, and technical communications to orally defend and report on collected data from the ET491 Marine Engineering Technology Capstone I project. This project will draw together elements of the MET curriculum to develop student competence in technical and non-technical skills to solve engineering problems. Prerequisite: ET491. Rec. 1, Cr. 1.

One one-hour section per week - One instructor per section - Typical Class Size 64

One lecturer section needed - Compensation = \$1,970

ET499 : Power Engineering Technology Capstone II LAB — A course in which the student, individually, and as part of a team, applies his/her knowledge of computer methods, engineering operations, engineering science and technical communications to analyze and create, communicate and defend a written project. At least one formal presentation will be included in this project. Additionally, the course will develop concepts of power plant operations, which build on previous PET curriculum material. This will include combined cycle power plant operations and technologies, using a power plant simulator, environmental considerations, Table of Contents Page | 214 professional ethics and current topics of interest in the power generation industry. This course is a communications intensive and computer intensive course. Prerequisite: ET498. Rec. 4, Lab. 2, Cr. 5.

One 2-hour lab per week – Two instructors (lead, assistant) per lab - Typical Class Size 9

Two assistant instructor sections needed - Compensation = \$985/section
