MAINE MARITIME ACADEMY
A College of Engineering, Management, Science, and Transportation

Engineering Adjunct Faculty – Multiple Positions

POSITION OVERVIEW
This document describes the duties and expectations of adjunct faculty members at the Academy. Adjunct faculty are non-permanent, temporary faculty who are hired on a semester by semester basis.

Course assignments (commensurate with the candidates’ background and expertise) may include hands-on marine engineering courses such as diesels, steam power systems, welding, machine tool and similar courses as well as engineering science courses such as fluids, thermodynamics, ship structures, technical communications, an/or other engineering courses.

Part time positions begin in late August 2016. Please see below for a description of the various courses and credit hours currently open. Please note which course applying for when submitting application, CV and cover letter. Compensation: $985/credit hour.

Position Title: Engineering Adjunct
Department: Engineering
Reports to: Department Chair, Laurie Flood

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 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.
- Hours vary, but must hold 2-3 office hours weekly for an adjunct teaching 12 credit hours per week, or pro-rated portion thereof for fewer credit hours.
- 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
- Minimum 3 years of demonstrated record of achievement and experience in relevant industry for technical support/lab positions.
- Membership in relevant professional organization(s).
- Prior successful teaching/training experience desired.
- Appropriate industry license(s).

SPECIAL CONDITIONS
- Background check is required.
- Must present original copies of transcripts.

COURSES/POSITIONS AVAILABLE

1 Credit hour: ET 491 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

3 Credit hours: EG372 Electrical Power II — 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.
Two sections needed – One lecturer each section – Typical Class Size 32

3 Credit hours: 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.

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

**2 Credit hours:** 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

**2 Credit hours:** 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 need a lead – Typical Class Size 16

**2.5 Credit hours:** EG351 Machine Tool Operations II — Practical study of the operation and utilization of lathes and milling machines. Provides a continuing opportunity to receive actual practice in threading and milling projects. Prerequisite: EG252. Rec. 1, Lab 3, Cr. 2.5.

Two sections needed – a lead & an assistant needed for both sections – Typical Class Size 24

**2 Credit hours:** ES180 Engineering Design I — A first course in “structured” conceptual design of engineering systems. Lectures emphasize methods of creating alternate approaches to solve a given “open ended” engineering problem, and identifying the most promising solutions. This communications intensive course includes a conceptual design project and simple computer application. Students will work in design teams devising, evaluating, and defending a feasible solution to a design problem. Prerequisite: CS150 or taken concurrently. Rec. 2, Cr. 2

One section needed – one lecturer- Typical Class Size 32

**2 Credit hours:** 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
Ten sections needed – 10 leads needed, 5 assistants needed – Typical Class Size 16

1 Credit hours: 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. Prereq: ET211 or ES201 Rec. 2, Lab. 1, Cr. 2.5. Nine sections needed – 5 leads needed, 9 assistants needed – Typical Class Size 12

3 Credit hours: 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. Three sections needed – 1 lecturer per section – Typical Class Size 20

3 Credit hours: ET201 Fluid Power — 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 One section needed – one lecturer – Typical Class Size 32

3 Credit hours: NA430 Naval Architecture II — Ship dynamics. This course continues the development of naval architecture topics including resistance and powering, seakeeping, and maneuvering. In parallel, students will develop a concept design for a small vessel based on a set of mission requirements. Prerequisite: NA372. Rec. 3, Cr. 3. One section needed – one lecturer – Typical Class Size 32

1 Credit hour: EG442 Advanced Welding — The theory and practice of specialized types of welding such as tungsten inert gas, aluminum, and pipe welding. Includes specialized fabrication problems encountered aboard ship. Prerequisite: EG243. Lab. 3, Cr. 1 One section needed – one lead and one assistant – Typical Class Size 14

2 Credit hours: 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. Three sections needed – One lecturer per section – Typical Class Size 32