Division of Marine Sciences and Technology
Department of Marine Engineering
Course Syllabus

COURSE TITLE: 2&4 Cycle Outboard Engine Repair
COURSE NUMBER: MTE 1053C
PREREQUISITES: None

CREDIT HOURS: 3 Credit hours
CONTACT HOURS: 60 Contact hours (20Hr Lecture/ 10Hr On-Line/ 30 Lab)

CLASS MEETING TIMES: May 12 – June 18, 2014 - M/W - 1300-1900hrs
CLASS METHOD: This course blends traditional face-to-face and online learning. Students are expected to attend classroom sessions on (dates and times) as well as participate in online activities as assigned.

INSTRUCTOR: Captain John DeMeo
John.demeo@fkcc.edu
Office: Rm 1613 (Marine Eng.Bldg.)
Phone: (305) 809-3209

OFFICE HOURS: Mon 11:00am-1:00pm/7:00pm-8:00pm
Tues 12:30pm-1:00pm/6:00pm-7:00pm
Wed 12:30pm-1:00pm/7:00pm-9:00pm
Thur 10:00am-1:00pm

COURSE DESCRIPTION: This course is not ordinarily counted in the Associate in Arts degree. A basic, two-cycle and four-cycle gasoline outboard engine course in terminology, fasteners, hand tools, measuring instruments and special tools. Laboratory consists of each student—individually—disassembling, inspecting and assembling outboard power heads. Using manufacturers’ literature, each student in lab must submit a written report stating forth every part name, function, condition, part number and cost, as well as special tools or procedures used on each power head.
**COURSE OBJECTIVES**

This is an introductory course designed to teach beginners the basic engine parts and systems and how to keep an organized work station. They will learn to identify these parts, recognize signs of wear, measure service tolerances, navigate operator manuals, use special tools, as well as a variety of other skills needed to perform an engine overhaul. Experienced mechanics will learn about how engines have evolved and how these systems work to make modern engines more efficient, with higher power output and easier maintenance and troubleshooting capabilities. They will also get hands on experience with overhauling to improve on what they already know and form better work habits.

**REQUIRED TEXTBOOK**

- **TEXTBOOK**: Understanding the Outboard Motor Third Edition
- **PUBLISHER**: Prentice Hall
- **AUTHORS**: Eugene W. Stagner
- **ISBN**: 0-13-094318-5

**PROPOSED COURSE SCHEDULE**

Please note: The course schedule is subject to change to meet the needs of the course and its students. If you miss a class, it is YOUR responsibility to stay current.

<table>
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<th>Module</th>
<th>Textbook Chapters--Topics</th>
<th>Assignments-- Points</th>
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<td>Module 1</td>
<td><strong>Introduction: 4 Hrs Lecture</strong></td>
<td><strong>Attendance:</strong></td>
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<tr>
<td>Introduction</td>
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<tr>
<td>Class 1</td>
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<td>Outboard History</td>
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<td><strong>Homework Assignments:</strong> Read Chapter 1-3</td>
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<td>Module 2</td>
<td><strong>Safety: 4 Hrs Lecture</strong></td>
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<tr>
<td>Safety</td>
<td>Safety Lecture</td>
<td>No Points</td>
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<td>Class 2</td>
<td><strong>Homework Assignments: 1 Hrs Online</strong></td>
<td>Mandatory</td>
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<td>Complete Online Homework 1</td>
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<td><strong>Safety Exam:</strong> Worth No Points</td>
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<td>A passing grade above 80% is required.</td>
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<td>Module 3</td>
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<td><strong>Attendance:</strong></td>
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<td>Theory</td>
<td>Tools and Usage</td>
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<td>Introduction to Internal Combustion Engines</td>
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<td><strong>Homework Assignments: 1 Hrs Online</strong></td>
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<td>Complete Homework 2</td>
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<td></td>
<td>Read Chapter 4</td>
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</table>
| Theory Class 4 | Theory: 4 Hrs Lecture  
Outboard 2&4 Cycle Engines | Attendance:  
200 Points  
Homework:  
50 Points |
|---|---|---|
| Homework Assignments: 1 Hrs Online  
Complete Chapter 1-4 Questions  
Read Chapters 10 |  |
| Theory Class 5 | Theory: 4 Hrs Lecture  
Outboard Engine Components  
Review for Exam | Attendance:  
200 Points  
Homework:  
50 Points |
| Homework Assignments: 1 Hrs Online  
Read Chapter 13  
Homework 3 |  |
| Module 4 Exam Class 6 | Mid-Term Exam: 4 Hrs Online  
Complete BRP E-ssentials: Understanding the Outboard with a grade equal to or greater than 80%.  
Homework Assignments: 1 Hrs Online  
Read Chapter 14  
Homework 4 | Exam:  
Worth No Points  
A passing grade above 80% is required.  
Homework:  
50 Points |
| Module 5 Lab Classes 7 - 11 | Lab: 28 Hrs Lab  
Complete Lab Stations 1 – 10  
Homework Assignments:  
Complete Chapter 10, 13, 14 Questions  
All Homework Is Due on Class 9 | Each Lab Station:  
50 Points  
7 Stations Minimum are required. |
| Module 6 Lab Cleanup Class 12 | Lab: 2 Hrs Lab | Attendance:  
Non-Attendance will result in a loss of 601 points against the student’s final grade. |

**STUDENT EVALUATION AND COURSE POLICIES**

<table>
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<tr>
<th>STUDENT GRADE DETERMINATION</th>
<th>FKCC GRADING SCALE</th>
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| **20%**  
Attendance – 200 Points Each – Total 600 | Points | Percentage | Grade |
| 2700 - 3000 | 90-100% | A |
| **18%**  
Lab Stations – 50 Points Each – Total 500 | 2400 - 2699 | 80-89% | B |
| **12%**  
Homework – 50 Points Each – Total 300 | 2100 - 2399 | 70-79% | C |
| **30%**  
Final Exam –1000 points | 1800 - 2099 | 60-69% | D |
| **20%**  
Quizzes – 100 Points Each – Total 600 | Below 1800 | Below 60% | F |
Class Policies

Exam Policy

- All exams are considered pass or fail for 0% toward the students final grade.
- Students must pass all exams with a grade of 80% or greater.
- Students will be allowed 3 attempts to pass any exam.
- Students will be allowed 1 page of hand written or typed notes.
- Students not passing any exam after 3 attempts will receive a failing grade.
- Students missing the exam without an “Excused Absence” will receive a failing grade for the class. No exceptions. (See below for a list of Excusable Absences)
- No cellphones. All cellphones must be turned off during testing periods. If there is an emergency or some other reason in which it is necessary to be left on, the student will notify the professor prior to the class with the reason. The professor reserves the right to withhold the test from any student refusing to turn off a cell phone for any reason. In this circumstance students will not be given a makeup exam.

Excused Absences

Life is filled with challenges and obstacles that we all must overcome. This program is a challenge too which you have voluntarily committed yourself. This class should be a priority and you should not be scheduling activities during the time periods this class meet. That being said, I do understand that emergencies come up from time to time. You must understand that I have heard every excuse for missing classes from my dog died all the way too I got called to the White House! Below I have listed several instances in which an absence will be excused.

- A death in the immediate family:
  Immediate means; parent, spouse, child, grandparent, or sibling. You must provide documentation of the loss in the form of; an obituary from a newspaper with a current date, or a signed and dated letter from a mortuary stating the relationship between you and the deceased. I do understand that any loss of life can devastating, this is however the only instance of a loss of life that will allow excuse from this class.
- Illness:
  An illness serious enough to miss class with an excused absence is serious enough to require a trip to the doctor’s office. Students out sick from class will provide a letter of excuse from a medical doctor stating, “In my medical opinion, (Your name) should be excused from class on (the date of class or classes to be missed) due to the severity of their illness.” This letter should be signed, dated, and written on the doctor’s office letterhead. If this documentation is not provided in the manner in which you see above the absence will not be excused.
- Military Orders:
  A student on military orders MUST provide a copy of the orders to the professor.
- College Error:
  If I make a mistake, or the college has created some action that prevents you from attending class can be documented you, the student, will not be penalized.
Above are the only absences that will be excused. You should also understand that an excused absence does not mean that you are awarded points for attendance, tests, or homework. An excused absence shall only allow you to turn in any work that was due on that day for no penalty.

**Reading Assignments and Homework**

- All reading assignments and homework shall be done outside of class time. Students will have the duration of the class to complete all reading and homework assignments.

**Attendance**

- I will strictly monitor student attendance and participation during each class session.
- Students who do not regularly participate in class are considered absent from the class.
- An instructor may withdraw a student from courses for excessive absences and/or non-attendance up to the 70% point in the semester.

**Class Participation**

In order to receive full points for class participation students must actively work during labs in a clean and organized manner. Students working in groups must SHARE the workload. All work should be completed properly and thoroughly.

- Other key points:
  - These participation points are the easiest part of your grade to earn, and also the easiest to forget to do. Don't forget!

**Lab Stations:**

Students passing the Mid-Term Exam will be eligible to move into the Lab Station portion of the class. During this time students may come and go from the lab at their own pace. Students will be given 28 hours to complete 10 stations during the scheduled class period. Students that do not complete a minimum of 7 stations with a passing grade will receive a 0 for all lab station grades regardless of the amount of work actually completed. This is 33% of your final grade. Please take it seriously.

The professor reserves the right to stop all work in the lab and remove any student for any reason.

**Communication:**

All class e-mail communications should be conducted using your FKCC student email address. The prime responsibility for timely communications rests with you - the student.

Important Note: If I have not responded to your email or voicemail message by the end of the day after you left the message, you should assume that I did not receive it and leave another message.

**Academic Honesty & Plagiarism**

- Students are expected to respect and uphold the standards of honesty in submitting written work to instructors. Though occurring in many forms, plagiarism in essence involves the presentation of another person’s work as if it were the work of the presenter.
• Any cheating or plagiarism will result in disciplinary action to be determined by the instructor based on the severity and nature of the offense. It is the student’s responsibility to review the College’s policy on Academic Honesty.

Special Needs

• If you have any special needs or requirements pertaining to this course, please discuss them with the instructor early in the term.
• If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need assistance, please notify the Office for Students with Disabilities at 305-809-3292 via email at: karla.malsheimer@fkcc.edu or the course instructor immediately.
• Reasonable efforts will be made to accommodate your special needs.

Mandatory Required Dress Code:

1. 1 pairs of shatter resistant clear safety glasses.
2. Work Boots or Closed Toed Shoes
3. Coveralls or full Jeans and T-Shirt.
4. Mechanics Gloves (Optional)
5. A cotton baseball cap is recommended for all students, however for students with hair longer then chin length will be REQUIRED to properly keep hair tied back.

Students are not under any circumstances to wear or bring any of the following into the lab area:

1. Materials or clothing such as but not limited to nylon, spandex, polyester, wool, etc.
2. Hair products, cigarette lighters, combustible fluids, makeup or beauty products breathe spray, etc.

Any student found with any of the above products in the shop area will be terminated from the program immediately.

3. Drugs of any kind.
   i. The instructor must be notified of all prescription drugs in the shop.

Students caught in possession of, using, or suspected being under the influence of any mind-altering substance will be grounds for termination from the course immediately.

Students that are not properly dressed will not enter the lab.

Required Tool List:
Students are REQUIRED to have their own tools. Marine Engineering will provide “Specialty” tools to be checked out and returned every day.

Tool Box or Bag
Needle Nose Pliers
6” Slip joint Pliers
Wire Cutters (side cutters)
Pocket Knife 3”
Combination Wrenches (Standard) 5/16” thru 1 1/8”
Combination Wrenches (Metric) 8mm thru 17mm
Allen Wrenches 1/16” thru 3/8”
Allen Wrenches 5mm thru 10mm
Ball peen hammer 12 to 14oz.
Screwdriver set: Phillips #1, #2 and #3
   Standard (flathead) #1, #2 and #3
   (Screwdrivers should be average shank and one stubby each Philips, Flathead) #2
Feeler gauge set: .0015 thru .030
Gasket Scraper
Socket sets: 3/8” Drive 3/8” thru 13/16” with 6-point configuration (Standard)
            8mm thru 17mm with 6-point configuration. (Metric)
            NOTE: 12 point-configured sockets are ok if of good quality.
Extensions for socket set: 3” and 6”
Ratchet 3/8” drive
Flexible extension will be handy
Torque Wrench 3/8” drive, 0- 150# range minimum.
Ring Compressor 1-4” range.

REQUIRED TOOL LIST – SUPPLIMENTAL

Test light – 12 volt
Jumper leads – 14 gauge, 6ft. length
Flashlight
¼” Socket Set (Standard)
¼” Socket Set (Metric)
¼” Ratchet
¼” Extensions – 1”, 3”, 6”
¼” flexible extension
Wire Strippers/crimpers
Hook Tool – Commonly called a #*&@!” Hook- (for the removal of cotter pins, etc.)
Assortment of punches – center, roll pin, etc.
Pry Bar – Approximately 12” is fine
½” to 3/8” adapter
3/8” to ¼” adapter
Final Things to Remember:

Though am always excited to have new students, I am always puzzled at the notion “... there are no dumb questions...” This just is not correct. Below I have listed some things you should never ask or discuss with me:

1. What did we do yesterday?
   My answer to that question will always and forever be, “I don’t remember...” If you did not attend class my class do not ask me what happened. I went over what was covered on the day you did not attend. I will not go over it again until the next time the class is offered. Please see a classmate for the notes and information you missed.

2. Will this be on the test?
   My answer to that question will always and forever be, “I have no idea... I don’t remember what I wrote.” Assume everything that I say, or that you read during the course of this class will be on your exam. In fact, you should go the extra mile and assume that if you ask me that question I may blindside you with the starting line up of the 1956 Boston Red Sox or questions regarding anything and everything within this known universe and beyond.

3. When is (insert name of assignment) due?
   My answer to that question will always and forever be, “I have no idea... I don’t remember what I wrote.” All your due dates are on your calendar in D2L. If you do not know how to use D2L go to the library and ask for a D2L tutorial. All other important due dates were explained on day 1 of class and also are provided in the syllabus.

4. Did you get my email yet?
   I promise that if I got your email you would have a response within 24 hours. If you did not receive a response within that time, assume I did not receive your email.

5. The reason I did not complete my assignment was...
   With all honesty, I do not care why you did not complete your assignment unless it is for one of the “excused absences”. Please do not explain this information to me, as I am not your counselor. Since I will not be helping you with this information I have provided the information for Dr. Phil. I am sure he can help you vent. Dr. Phil Show 5482 Wilshire Boulevard #1902 Los Angeles, CA 90036

Students are expected to familiarize themselves with FKCC Policies, which can be found in the current Student Handbook.