NAME 4170

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University of New Orleans

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NAME 4170 -- Marine Design – Syllabus
Fall Semester 2015
T-TH 5:00 – 6:15 PM, Room E321

Instructor: Pamela J. Pilaroscia
Office Hours: By appointment

Catalog Description:
Preliminary ship and offshore structure design to meet owner's general, environmental and economical requirements; principal dimensions, form, power requirements and stability; outfitting, structural design, and preparation of preliminary design drawings.

Prerequisites: ENGL 2152 — Technical Writing
NAME 3120 — Ship Hull Strength
NAME 3130 — Marine Engineering I (or 3131 Marine Engines)
NAME 3150 — Ship Resistance & Propulsion
NAME 3160 — Offshore Structure and Ship Design
NAME 3171 — Marine Design Methods

Primary References: Ship Design and Construction, SNAME
Principles of Naval Architecture, SNAME
Marine Engineering, SNAME, Harrington
Ship Structural Design, SNAME, Hughes
Design of Welded Structures, Blodgett
AISC Manual of Steel Construction

Other Information Resources: SNAME publications database at www.sname.org
Various periodicals in UNO Library
Internet search engines
Various Marine Codes/Rules (ABS, USCG, IMO, API, etc.)
USCG Marine Safety Center Website

Learning Objective: Upon completion of this course students will know how to execute the conceptual design of a ship or offshore structure or system and will be prepared to carry their design efforts to the preliminary design level in the next semester (NAME 4175).

Course Topics and Design Tasks:

• General Arrangements / Machinery Space Arrangement
• Offset development and hull and tank modeling (GHS)
• Tank Arrangement / Compartment Plan
• Load Line Calculation and Conditions of Assignment
• Structural design (local and hull girder) – Rules and Code based
• Stability requirements and analysis
• Resistance and powering estimation
• Machinery and propulsion options and selection
• Human Factors, Health and Safety, Environmental Impact
• Professional Responsibility and Ethic
Coursework Description:
Approximately two-thirds of the class time will be devoted to lectures covering the topics and design tasks listed above. There will be five to six homework assignments and a mid-term exam based on the lecture topics. A lines plan and general specifications/owner requirements for a “template vessel” will be provided to the students that will form the basis for some of the homework assignments as well as for the final project design deliverables. Students will form groups (usually 3-5 students in each group) in late October or early November and an oral presentation and final design report is required independently from each group. The oral presentation is generally given the last week of classes and the final design report is due at the scheduled final exam date/time.

Course Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>40%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam (final project)</td>
<td>35%</td>
</tr>
</tbody>
</table>

(A: 90-100  B:80-89  C:70-79  D:60-69  F: <60)

- Grading of assignments will consider whether or not my instructions were followed, neatness, completeness, grammar, spelling, technical accuracy, professional presentation and creativity where applicable.
- Late assignments will be accepted; however, a 10% penalty will be applied for each additional class day the assignment is late.
- Missed exams will result in a grade of zero unless I’m informed ahead of time that you must miss the exam for a specific, valid reason (e.g., work commitment like travel, death in family, illness, etc.) Missed midterm exams must be made up. If the final exam is missed then you will receive an incomplete for the course and must make up the final exam before the end of the first week of the next semester in which you are enrolled.

Required Computer Software Skills
- Word (writing reports, etc.)
- Excel (misc. calculations)
- PowerPoint (presentations)
- GHS (hydrostatics and stability)
- AutoCAD, Rhino3D or Multisurf (drafting and 3D modeling)
- NavCAD (resistance and propulsion analysis)

Attendance: Mandatory: A 0.10 overall grade deduction may be applied for all unexcused absences
- You are responsible for obtaining any information presented during a class that you have missed.
- Class participation is expected; you are expected to show up for class prepared.
- Try to ask questions during the class/lab period, not after class has just finished.

Academic Integrity:
Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

Accommodations for Students with Disabilities:
It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students that have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.