**Master of Science in Subsea Engineering Degree Plan**

**Effective Spring 2020**

### Category 1: Required Courses (9 hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Requirements</th>
<th>SCH</th>
<th>Semester</th>
<th>Grade</th>
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<td>2. SUBS 6310</td>
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<td>3. SUBS 6397</td>
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**Required Course Options:**
- MECE 6384 - Methods of Applied Mathematics I, or MECE 6385 - Methods of Applied Mathematics II, or SUBS 6305 - Mathematics for Subsea Engineers
- SUBS 6310 - Flow Assurance
- SUBS 6397 - Subsea Structures and Design

### Category 2: Restricted Electives (18 hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Electives</th>
<th>SCH</th>
<th>Semester</th>
<th>Grade</th>
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**Restricted Elective Course Options**
- SUBS 6305 – Mathematics for Subsea Engineers
- SUBS 6306 – Subsea Controls and Systems Engineering
- SUBS 6380 – Subsea Systems
- SUBS 6320 – Riser Design
- SUBS 6351 – Design of Blowout Preventers
- SUBS 6397 – Subsea Control Theory
- SUBS 6330 – Pipeline Design
- SUBS 6360 – Materials and Corrosion
- SUBS 6397 – Guide to Engineering Data Science
- SUBS 6340 – Subsea Processing and Artificial Lift
- SUBS 6370 – Computational Methods and Design Experiments
- SUBS 6397 – Advanced Flow Assurance

### Category 3: Electives (3 hours)

<table>
<thead>
<tr>
<th>Course Number</th>
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<th>SCH</th>
<th>Semester</th>
<th>Grade</th>
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**Elective Course Options:**

**MECHANICAL ENGINEERING OPTIONS**
- MECE 6335 — Heat Transfer with Phase Change
- MECE 6341 — Viscous Flow Theory
- MECE 6353 — Introduction to Computational Fluid Dynamics
- MECE 6362 — Mechanical Behavior of Materials
- MECE 6397 — Feedback Control Systems
- MECE 63XX — Selected Courses require approval from Program Director

**PETROLEUM ENGINEERING OPTIONS**
- PETR 6328 — Petroleum Fluid Properties and Phase Equilibria
- PETR 6368 — Well Drilling & Completion I
- PETR 6372 — Petroleum Production Operations
- PETR 6306 — Oil Field Facilities Design and Operation
- PETR 6336 — Petroleum Energy Markets
- PETR 6312 — Well Logging: Evaluation of Petroleum Formations

*These courses are subject to the approval by the Director. Students are strongly encouraged to take at least one course from another department or program within the Cullen College of Engineering. Mechanical Engineering graduate courses applicable to MS in Subsea Engineering include the above courses.*