### Interdisciplinary Minor in Hydrogen Technology

**IMHT**

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<th>Name (please print):</th>
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<td>Student Number:</td>
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<td>Primary Major:</td>
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<td>Expected Major Completion Term:</td>
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**Degree Services**

**Registrar’s Office**

#### Required Courses (Select 4-6 credits):

- ENT 1960 Alternative Fuels Group (1)
- ENT 2950 Alternative Fuels Group (1)
- ENT 2960 Alternative Fuels Group (1)
- ENT 3950 Alternative Fuels Group (1)
- ENT 3960 Alternative Fuels Group (1)
- ENT 4900 Alternative Fuels Group (2)
- ENT 4910 Alternative Fuels Group (2)
- ENT 4950 Alternative Fuels Group (2)
- ENT 4960 Alternative Fuels Group (2)
- ENT 4961 Alternative Fuels Group (1)

**Select one course from the list below:**

- CM/ENT 3974 Fuel Cell Fundamentals (1)
- MEEM 4260 Fuel Cell Technology (3)

**Select at least one course from the list below:**

- CM/ENT 3977 Fund. of Hydrogen as an Energy Carrier (1)
- CM/ENT 3978 Hydrogen Measurements Laboratory (1)

**Elective Courses: Select remaining credits from the list below:**

- CM 3110 Transport/Unit Operations I (3)
- CM 3120 Transport/Unit Operations II (3)
- CM 4000 Chemical Engineering Research (1-3)**
- CM 4310 Chemical Process Safety/Environment (3)*
- CM 4550 Industrial Chemical Production (3)
- EC 4620 Energy Economics (3)*
- EE 2110 Electrical Circuits (3)
- EE 3010 Circuits and Instrumentation (3)
- EE 3120 Introduction to Energy Systems (3)
- EE 3221 Introduction to Motor Drives (3)
- EE 4000 Electrical Eng. Undergraduate Research (1-4)**
- EET 2120 Circuits II (4)
- EET 3131 Instrumentation (3)
- EET 3390 Power Systems (3)
- ENG/SS 4510 Sustainable Futures I (3)*
- ENG/SS 4520 Sustainable Futures II (3)*
- ENT 3956 Industrial Health and Safety (2)*
- ENT 3975 Intro to Vehicle Design & System Modeling (1)

**Elective Courses (Continued):**

- MEEM 3210 Fluid Mechanics (3)
- MEEM 3230 Heat Transfer (3)
- MEEM 3999 MEEM Undergrad Research Proj. (3)**
- MEEM4200 Principles of Energy Conversion
- MEEM 4220 Internal Combustion Engines I (3)
- MEEM4240 Combustion & Air Pollution
- MET 3250 Applied Fluid Mechanics (4)
- MET 4300 Applied Heat Transfer (3)
- MET 4390 Internal Combustion Engines (3)
- MET 4900 Alternative energy systems (3)
- MY 3100 Materials Processing I (4)
- MY 3110 Materials Processing II (4)
- MY 4140 Science of Ceramic Materials (3)
- MY 4990 MSE Undergraduate Research (1-6)**
- SS 3800 Energy Technology and Policy (3)*

*Students are encouraged, though not required, to take at least one of these courses relating to the broader context and societal impacts of hydrogen technology.

** Topics must be approved by the minor program coordinator.

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: ENT4961 (ENT3950 and ENT3960 and ENT4950 and ENT4960), CM/ENT3974 (CH1100 or CH1110 or CH1140), CM/ENT3977 (PH2200 and CH1100 or CH1110 or CH1140), CM/ENT3978 (PH2200 and CH1100 or CH1110 or CH1140), CM3110 (CM2120 and PH2100 or (MA3520 or 3521 or 3530 or 3560), CM3120 (CM1110 and (MA3520 or 3521 or 3530 or 3560), CM3130 (CM1110 and (MA3520 or 3521 or 3530 or 3560), CM3130, CM4250 (CH2400 or CH2410) and CM3550 (C)), EC4620 (EC3001 or EC3002 or EC3003 and UN2002), EE2110 (EE2120 and (MA3520 or 3521 or 3530 or 3560), EE3120 (EE2110 or EE3010), EE3221 (EE2110 or EE3010), EET2120 (EET2110 and (MA1116 or MA1161 or MA1161C) and EET3131 (EET1141 or EET2311 or EET2220, EET3131 (EET1141 or EET2311 or EET2220, EET3910 (EET3313), ENG/SS 4510 (UN2002), ENT3975 (ENG1102), MEEM2120 (MEEM2200 and MEEM2700 (C)), MEEM3230 (MEEM3230 or MA3520 or equivalent), MEEM4220 (MEEM3210, MET2130, MET4300 (MET3600), MET4390 (MET3600 (C), MET4900 (MET3600, MY3100 (MY2100), MY3110 (MY3100), MY4140 (MEEM2200 or MY3100 or CM3230), SS3800 (UN2002))

Refer to the University Catalog for information on university minor requirements.

Credits Required = 16

Total Credits _______