

# The University Senate of Michigan Technological University

## Proposal 1-13

(Voting Units: Academic)

### **“Proposal to rename the *Interdisciplinary Minor in Hydrogen Technology* to the *Interdisciplinary Minor in Alternative Energy Technology*”**

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Department of Chemical Engineering

Submitted: 2 April 2012

Reviewed and Approved Pending Editorial Changes by the CPC: 27 September 2012

Editorial Changes Approved by F.A. Morrison: 3 October 2012

#### **1. General description and characteristics of program.**

This Interdisciplinary Minor in Hydrogen Technology was established under the leadership of a faculty member who has left the University. The new title reflects a broader focus on alternative energy technologies, rather than just on hydrogen technology.

The new version is structured so that the mandatory classes are background to the optional classes. The optional classes are grouped so that energy technologies of various sorts are emphasized in the program. Two of the required classes for the minor are no longer taught at Michigan Tech and are being dropped in the Chemical Engineering curriculum binder in 2012 (CM3977 and CM3978). The Alternative Fuels Enterprise, which has been required for the minor, has changed its focus away from only hydrogen fuel technologies. Because of these circumstances, it becomes desirable to change the name and focus of the IMHT.

Proposed Changes:

1. Change the title to *Interdisciplinary Minor in Alternative Energy Technology*
2. Make the following rearrangements of the course requirements for the minor:
  - The elective course list for the minor is being updated to reflect courses being dropped because they are no longer offered and allow expansion of the electives to accommodate the broader theme of the minor. No new courses are being developed.
  - Involvement in the Alternative Fuels Group Enterprise is no longer mandatory but is optional.
  - A circuits-focused course is now mandatory and no longer optional
  - A course in heat and momentum transfer is now mandatory and no longer optional

#### **2. Rationale.**

The Interdisciplinary Minor in Hydrogen Technology was established under the leadership of a faculty member who has left the University. Because of his departure, two of the required classes for the minor are no longer taught at Michigan Tech and are being dropped in the Chemical Engineering curriculum binder in 2012 (CM3977 and CM3978). The Alternative Fuels Group Enterprise, which is required for the minor, continues to exist at Michigan Tech, but its focus has changed away from hydrogen technology. Furthermore, Enterprise participation is a demanding commitment and Enterprises cannot accommodate too large of a student population, unlike a minor program. So Enterprise participation should not be a requirement for those interested in completing this minor, especially given the larger number of elective courses that fit within this proposed broadening of the minor. Because of these circumstances, it becomes desirable to change the name and focus of the IMHT.

#### **3. Discussion of related programs within the institution and at other institutions.**

There are no related programs at Michigan Tech. Stakeholders of the IMHT minor at Michigan Tech have been contacted and brought into the discussion of the proposed changes ([alt-energy-minor-discuss-l@mtu.edu](mailto:alt-energy-minor-discuss-l@mtu.edu)). Additional elective courses will be added to the minor in a second stage as part of the continuous improvement of this minor.

#### **4. Curriculum design (refer to format of degree audit form).**

See attached proposed [degree audit](#) for the proposed revision to the IMHT.

**5. New course descriptions. (New Course Add Forms are needed for each course and will be processed upon final approval of program.)**

None.

**6. Additional resources required. (Additional information may be requested by the Senate Finance Committee.)**

None.

**7. Accreditation requirements.**

None.

**8. Planned implementation date.**

Changes to the IMHT binder (part of the Chemical Engineering binder) will be submitted in October 2012 for implementation in the Fall 2013 catalog.

**Introduced to Senate: 10 October 2012**

**Approved by Senate: 24 October 2012**

**Approved by Administration: 01 November 2012**