

UNIVERSITY OF MICHIGAN-FLINT
REGENTS COMMUNICATION

ACTION REQUEST

SUBJECT: New Undergraduate Degree Program by the Department of Earth and Resource Science, College of Arts and Sciences at the University of Michigan-Flint

ACTION REQUESTED: Approval to offer a new Bachelor of Science Degree in Energy and Sustainable Systems, College of Arts and Sciences at the University of Michigan-Flint

EFFECTIVE DATE: February 1, 2011

The College of Arts and Sciences, through the Department of Earth and Resource Science, at the University of Michigan-Flint proposes a new undergraduate degree program, "Bachelor of Science Degree in Energy and Sustainable Systems," effective February 1, 2011. This is in response to needs of our undergraduate students who are interested in a more discipline-specific program of study than currently offered. With the program goals concentrated in two areas: energy and sustainable systems, this program will serve students interested in renewable energy, sustainable development and redevelopment of urban areas, energy planning and policy analysis, and climate change analysis.

The proposed program will prepare students with the necessary scientific foundation, planning skills, analytical methods, and requisite knowledge of the key energy and sustainability issues at the regional, national, and international levels so they can become effective performers in their future careers or graduate-level academics. A sampling of the areas students will be professionally qualified for includes: knowledge of the interaction between climate change and the current/proposed energy uses; the ability to assess and prepare technical planning and policy documents related to various energy uses and their environmental impacts; knowledge of the distribution and capabilities of current and alternative/renewable energy sources; green building and energy auditing techniques; and, urban and regional planning methods such as innovative zoning and "smart growth" for improving the local and regional environments with respect to their energy efficient, water quality, and other general systems of infrastructure (e.g., electrical grids and fiber optic networks).

The proposed curriculum includes 60 credit hours in the areas of Science Foundations (11), Techniques (17), Professional Development (9), and Energy and Sustainable Development (23) as well as the UM-Flint general education requirements, including 12 prerequisite credits in the areas of College Physics, Spreadsheet Software, Human Geography, and Global Environmental Systems and Sustainability. There is significant evidence that a rapid increase in the demand for qualified professionals in the energy and sustainability fields now exists – and will continue. This demand is accompanied by a need to provide the relevant educational skills to support this trend, and by the desire of many students to pursue the related major courses of study.

The proposed B.S. in Energy and Sustainable Systems has been thoroughly reviewed and supported by the University of Michigan-Flint College of Arts and Sciences faculty, Academic Affairs Advisory

Committee, the Chancellor's Advisory Committee for Budget and Strategic Planning, as well as the provost and chancellor.

The proposed degree program fully supports the educational mission of the University of Michigan-Flint. Pending approval of the proposal, the program will begin to admit students for the fall 2011 semester. The program will be included in the Department's comprehensive student outcomes assessment plan which has been approved by the University of Michigan-Flint Academic Assessment Committee. With the recent addition of one tenure-track faculty member, sufficient faculty for implementation and space to initiate this program are in place.

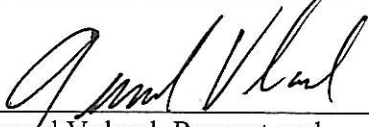
We therefore enthusiastically recommend and endorse the proposed Bachelor of Science Degree in Energy and Sustainable Systems, effective February 1, 2011.

RECOMMENDED BY:

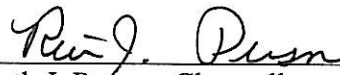


D. J. Trella, Dean
College of Arts and Sciences

RECOMMENDATION ENDORSED BY:



Gerard Voland, Provost and
Vice Chancellor for Academic Affairs



Ruth J. Person, Chancellor
University of Michigan-Flint

January 2011