

Periodic Review/Program Evaluation

Recommendations from Review Panel Regarding Programs to Prepare Teachers of Physics (DE)

January 17, 2007

Institution: Central Michigan University					
Program Level	Major (# Credits)	Minor (# Credits)	Group Major (# Credits)	Group Minor (# Credits)	Endorsement Only (# Credits)
Elementary					
Secondary	?37 ?38	25			
K-12					
Source of Standards/Guidelines: Michigan State Board of Education				Pub. Date: August 8, 2002	
Program Assessment Summary/Recommendation					
Meets all standards and requirements		X Not all standards and requirements are met		X Insufficient documentation for program review	
Approval		X Approval Pending		Approval Suspended	
<p>Standards/requirements not met:</p> <p><i>Standard 1.1.3.8 Enthalpy</i> Not covered in the minor program.</p> <p>Provide additional narrative and documentation explaining how introductions to topics in the minor program covers selected standards to the standards-specified comprehensive level of proficiency:</p> <ul style="list-style-type: none"> • <i>Standard 1.1.3.1 temperature, Standard 1.1.3.2 work, and Standard 1.1.3.3 specific heat</i> • <i>Standard 1.1.7.2 nuclear models</i> <p>Provide additional narrative and documentation explaining how introductions to topics in both the major and minor programs covers selected standards to the standards-specified comprehensive level of proficiency:</p> <ul style="list-style-type: none"> • <i>Standard 1.1.6.1 wave motion, Standard 1.1.6.2, Standard 1.1.6.3 doppler effect, Standard 1.1.6.4 standing waves, and Standard 1.1.6.5 resonance</i> • <i>Standard 1.1.7.1 properties of nuclei, Standards 1.1.7.5 fission, and Standard 1.1.7.6 fusion</i> <p><i>Standard 6.0 . . . as identified by the Council of State Science Supervisors . . .</i> Provide additional documentation of candidates' experience with and use of Council of State Science Supervisors' science classroom safety resources: http://www.csss-science.org/safety.shtml.</p>					
<p>Additional information needed/action to be taken:</p> <p>Confirm whether or not major program is 37 or 38 semester hours. Current Form XX states 38 but required course work appears to sum to 37 semester hours.</p>					

Comments:

Both program options exceed minimum teacher certification rules, which are 30 semester hours and 20 semester hours for major and minor programs, respectively.

The institution is complimented for the self-directed, inquiry-based laboratory opportunities provided for candidates in such courses as PHY 277, PHY 231, and PHY 578.

The institution is complimented for requiring PHY 505 in both major and minor programs.

The institution is complimented on the P-12 collaborative activities of the physics faculty. Six of nine report P-12 collaboration. Two of 9 faculty report that they are more than "somewhat familiar" with the Michigan Curriculum Framework (MCF). Perhaps the institution could find means and opportunities for increasing the number of physics faculty who have more experience with the MCF.

The institution is encouraged to continue to find ways to provide physics-related field experiences for candidates in the minor program, by perhaps requiring PHY 507.

The institution should begin collecting program performance outcome data related to the Physics standards as an analysis of outcome data will be the basis of subsequent periodic program review.