

The University Senate of Michigan Technological University

Proposal 27-14 (revised 9 April 2014)

(Voting Units: Academic)

"PROPOSAL TO REVISE THE GENERAL EDUCATION PROGRAM"

March 15, 2014

EXECUTIVE SUMMARY

This proposal recommends actions to align the General Education program with University Student Learning Goals and the Michigan Transfer Agreement. Recommended actions include reducing the number of learning goals in 2000-level core courses from two goals to one goal, and establishing learning goals for existing and new HASS and STEM courses over the next two academic years. Recommended changes to HASS and STEM include distribution requirements to align with the Michigan Transfer Agreement (a second course in Composition or Communication, two courses in Humanities/Fine Arts, two courses in Social Sciences, and science courses in two different disciplines), and the establishment of new restricted lists for both HASS and STEM. In 2016-7, the General Education Council will conduct a review of assessment results and student enrollment patterns in General Education courses to determine how well the program is meeting University Student Learning Goals.

1. GENERAL DESCRIPTION OF PROGRAM AND RATIONALE:

1.1 Background:

Learning Goals and Assessment. The Higher Learning Commission (HLC), our regional accreditor, addresses general education in its Criteria for Accreditation:

Criterion 3-B2: The institution articulates the purposes, content, and intended learning outcomes of its undergraduate general education requirements. The program of general education is grounded in a philosophy or framework developed by the institution or adopted from an established framework. It imparts broad knowledge and intellectual concepts to students and develops skills and attitudes that the institution believes every college-educated person should possess.

Criterion 4-B1: The institution has clearly stated goals for student learning and effective processes for assessment of student learning and achievement of learning goals.

Criterion 4-B3: The institution uses the information gained from assessment to improve student learning.

In its 2009 review of Michigan Tech's Systems Portfolio, HLC noted as an "opportunity" (*aka* weakness) that "assessment at Michigan Technological University would be strengthened by developing a common framework and protocol that may enable regular, system-wide assessment to occur and ensure that institutional objectives are reached" (1P2c). Moreover, HLC noted the General Education program had no systematic review process (1P1b) and that no examples were provided to explain the faculty-driven process for assessing student learning in General Education.

In response to this critique, in 2011 Michigan Tech established eight University Student Learning Goals (USLGs):

1. Disciplinary knowledge
2. Knowledge of the physical and natural world
3. Global literacy and knowledge of human culture ^[1]
4. Critical and creative thinking
5. Communication
6. Information literacy
7. Technology
8. Values and civic engagement

The General Education Council then adopted six of these goals for the General Education program:

2. Knowledge of the physical and natural world
3. Global literacy and knowledge of human culture
4. Critical and creative thinking
5. Communication
6. Information literacy
8. Values and civic engagement

In 2012 a new General Education core was approved with a mandate that these core courses address Goals 3, 4, 5, 6 and 8 as follows:

General Education Core Course	Learning Goal
UN1015 Composition	Goal 5 Communication Goal 6 Information Literacy
UN1025 Global Issues/Modern Language Option	Goal 3 Global Literacy and Human Culture Goal 6 Information Literacy
HUFA-2000 core course	Goal 4 Critical and Creative Thinking Goal 8 Values and Civic Engagement
SBS-2000 core courses	Goal 3 Global Literacy & Human Culture Goal 8 Values and Civic Engagement

Student achievement in General Education provides a foundation for application of these goals in the major. Student achievement of the goals in the General Education core will be assessed using random samples of student work in the core courses.

At the same time as learning goals were being established at the university level, degree programs in the College of Sciences and Arts, the primary providers of General Education courses, were also establishing program learning goals and determining how best to assess these goals.

LEAP's VALUE Rubrics and Assessment of Learning Goals. LEAP (Liberal Education and America's Promise) is a campus action and research initiative of the American Association of Colleges & Universities (AAC&U). LEAP developed a set of VALUE rubrics for assessment of learning goals and outcomes that are not easily measured by existing tests. VALUE stands for Valid Assessment of Learning in Undergraduate Education. These rubrics are used by hundreds of institutions nationwide and have demonstrated validity and reliability;^[2] they are an option to report learning outcomes for the College Portrait/Voluntary System of Accountability (<http://www.voluntarysystem.org/>) in which Michigan Tech participates. These rubrics will be identified hereafter in this proposal as VALUE rubrics.

Michigan Tech's Assessment and General Education Councils decided to use the framework provided by the VALUE rubrics to assess General Education and non-disciplinary USLGs (i.e., Goals 2-6 and 8). Since 2012, Goal Committees for communication (Goal 5), global literacy and human culture (Goal 3), and information literacy (Goal 6) have been adapting the VALUE rubrics for assessment at Michigan Tech. In 2013, workshops were held for faculty teaching General Education core courses to practice using these rubrics to assess samples of student work. In 2014, Goal Committees were established for critical and creative thinking (Goal 4) and values and civic engagement (Goal 8); a Goal Committee for knowledge of the physical and natural world (Goal 2) will be established in fall 2014.

Assessment of the General Education program is overseen by the General Education Council, with support provided by the assessment specialist in the Jackson Center for Teaching and Learning. Random samples of student work from courses with the identified goals are assessed using the Michigan Tech adapted VALUE rubrics by teams of assessors that include members of the appropriate Goal Committee as well as faculty teaching the courses. Results are compiled with support from the assessment specialist. Assessors then review results, make recommendations for improvement of student learning and the assessment process, and submit both to the General Education Council on a timely basis. Assessment is a process of continuous improvement.

Michigan Transfer Agreement. To promote transparency among Michigan institutions and ensure accurate transfer information, in June 2013 the Michigan Transfer Agreement (MTA) recommended a 30-credit block of distribution courses that would transfer between Michigan two-year and four-year institutions. This 30-credit block includes the following courses:

- 1 course in English composition
- 2nd course in composition or 1 course in communications
- 1 course in mathematics
- 2 courses in social sciences from 2 disciplines
- 2 courses in humanities and fine arts from 2 disciplines (excluding studio and performance classes)
- 2 courses in natural science from 2 disciplines including one course with laboratory experience

President Mroz signed the MTA for Michigan Tech in February 2014.

1.2 Actions to align the General Education program with learning goals and MTA:

The General Education program now needs to address achievement of these goals in the HASS and STEM components. The STEM component would focus on Goal 2 *Knowledge of the Physical and Natural World*. The HASS component would focus on Goals 3, 4, 5 and 8 – the same goals as the General Education core, except for Goal 6 *Information Literacy*, which would be expected to be achieved in the major to address disciplinary needs. In addition, as the number of transfer students continues to grow, the council also needs to prepare to align with the MTA 30-credit block.

There are multiple constraints and concerns to consider:

- Early feedback from faculty suggests that there is not a strong alignment of the SBS-2000 and HUFA-2000 core courses with the assigned learning goals. Pilot assessments will be conducted in spring 2014.
- Departments delivering General Education want a progression from lower level to higher level courses.
- Requiring all Michigan Tech students to meet four USLGs (3, 4, 5 and 8) with only 12 HASS credits is likely to create problems for scheduling, advising, and communicating the goals clearly to students.
- Departments delivering General Education are also tasked with assessment of their majors, often within the same courses but simultaneously addressing different (major program) goals.
- Goal Committees to adapt the VALUE rubrics for Michigan Tech are not fully deployed.
- While the Council believes that students will benefit from a General Education program that is intentional and fully framed by the learning goals, it appreciates that more time needs to be allocated in order to
 - develop more fully the assessment infrastructure for learning goals by establishing Goal Committees for Goals 2, 4, and 8 (there are currently committees for 3, 5, and 6),
 - enable the Goal Committees to adapt the VALUE rubrics,
 - provide faculty more time to experiment with adapting HASS courses to achieve the learning goals, and
 - evaluate assessment results to ensure the best alignment of courses and goals.

To meet these constraints and concerns, the General Education Council proposes to implement the following actions:

1. Immediately establish Goal Committees for Goal 2 *Knowledge of the Physical and Natural World*, Goal 4 *Critical and Creative Thinking*, and Goal 8 *Values and Civic Engagement*. These committees will develop Michigan Tech rubrics based on VALUE rubrics and provide information and workshops to help faculty consider how to demonstrate student learning of these goals and how the rubrics will be used for assessment of student learning.
2. Reduce the Senate-approved learning goals for HUFA-2000 and SBS-2000 core courses from two goals to one goal beginning fall 2014. Rename the lists Goal 4 and Goal 8. Courses *currently on* the HUFA-2000 list will address only Goal 4 *Critical and Creative Thinking* and be renamed the Goal 4

List. Courses currently on SBS-2000 list will address only Goal 8 *Values and Civic Engagement* and be renamed the Goal 8 List. This reduces the number of learning goals to be achieved and assessed for student learning in each course, but still allows all five goals to be covered in the General Education core. It also maintains disciplinary alignment with the Michigan Transfer Agreement. Departments can choose which and how many courses to offer on these lists. In order to add courses to either list, or move a course from one list to another (for example, a humanities course in philosophy may be better aligned with Goal 8), departments must go through the binder process and additions/changes must be approved by the General Education Council and appropriate Goal Committee. Availability of sections and seats will be monitored.

3. Require all HASS courses to identify **one** learning goal – Goal 3 *Global Literacy and Human Culture*, 4 *Critical and Creative Thinking*, 5 *Communication*, or 8 *Values and Civic Engagement* – beginning in fall 2014.
 - a. All sections of a course taught by multiple instructors must have the same goal.
 - b. Departments will submit lists of existing HASS courses with goals identified by April 2014 to the General Education Council.
 - c. New HASS course proposals must identify one of these four learning goals on the syllabus **and identify assignments wherein students can demonstrate achievement of the goal.**
 - d. It will be important that, in every academic year, HASS offerings provide courses that address all four goals. This will be monitored by the Council, which will work with departments as needed.
 - e. Student work from all HASS courses will be assessed for student learning of the identified goal.
4. Require courses on the mathematics and science lists (STEM component) to identify Goal 2 *Knowledge of the Physical and Natural World* on their syllabi beginning in 2014. Samples of student work from courses on these lists will be assessed for student learning of Goal 2.
5. In 2014-5 and 2015-6, conduct assessment of student learning for Goals 2, 3, 4, 5 and 8 in General Education courses that have identified those goals.
6. Revise the General Education HASS and STEM components to align with the Michigan Transfer Agreement. See “Changes Proposed for the General Education program, effective 2015-6.”
7. Conduct a review of assessment results and student enrollment patterns in General Education courses in 2016-7 to determine how well the General Education program is meeting University Student Learning Goals.

1.3 Changes Proposed for the General Education program, effective 2015-6:

Four principles will apply to all courses in the General Education program:

1. All General Education courses are open to all students.
2. All General Education courses (except for restricted STEM, see below) will be aligned with at least one of the six USLGs (2, 3, 4, 5, 6 and 8) adopted by the General Education Council for the General Education program. In the binder process, *all new course proposals* for general education must identify the learning goal on the syllabus and identify assignments that could be used to demonstrate achievement of the goal. See “New Course Review” in section 14 below.
3. Samples of student work in all General Education courses will be assessed against the designated learning goal with a target of achievement on the associated rubric of level 2 for 1000-2000 level courses, and level 3 for 3000-4000 level courses.
4. Courses on both HASS and STEM lists can count toward either HASS or STEM requirements on a student degree audit, but not toward both.

The following changes are proposed for the General Education program effective 2015-6. Table 1 summarizes the General Education program that would incorporate these changes, includes prerequisites and assessment requirements, and shows how the program aligns with the Michigan Transfer Agreement.

Proposed Changes to HASS:

1. Require one course in communication or a second course in composition that would be taught by communications or composition faculty (inclusive of GTAs), be aligned with Goal 5 *Communication*. Courses must be approved by the General Education Council following the process for new course review (Section 14 below) and meet the principles for all General Education courses listed above.
2. Require 3 credits of HU or FA (exclusive of the communication course) from the HASS list.
3. Require 3 credits of SS or EC or PSY from the HASS list.
4. Eliminate the creative endeavors list and the existing supplemental list.
5. Allow 1000 level courses to be listed in HASS.
6. Create a new HASS Restricted List.
 - a. It includes non-HU/FA/SS/PSY/EC offerings.
 - b. Courses must meet one HASS learning goal (3, 4, 5, or 8).
 - c. Students can take up to 3 credits from this list for HASS.
 - d. Courses must be approved by the General Education Council.
7. Prerequisites:
 - a. 1000-2000 level courses – no prerequisites are required, but may have UN1015 or UN1025 as a prerequisite.
 - b. Communication courses – UN1015 must be a prerequisite.
 - c. 3000-4000 level courses – both UN1015 *and* UN1025 are required; any additional prerequisites must be HASS courses.

Proposed Changes to STEM:

1. Reduce STEM by 1 credit to 15 credits. Departments can designate STEM courses for their degree programs to fulfill general education requirements.
2. Require courses on the mathematics and science lists (STEM component) to identify Goal 2 *Knowledge of the Physical and Natural World* as a course learning goal. Samples of student work from these courses will be assessed for student learning in Goal 2.
3. Require minimum 4 credits of mathematics at the college level.
4. Require two science courses from two different disciplines, including one with an associated lab.
5. Create a new STEM Restricted List.
 - a. It includes other STEM courses, and non-STEM courses which address STEM.
 - b. Courses on the restricted list must be engaged in the study of STEM topics **as demonstrated with graded student work that composes a minimum of 70% and may not count class attendance for more than 30%** of the course grade. Faculty in non-STEM departments can propose a course for the restricted list.
 - c. Courses must be approved by the Goal 2 STEM Committee and the General Education Council.
 - d. No student work is required for assessment.
 - e. Students can take up to 4 credits from this list to meet STEM requirements.

Note on new HASS and STEM Restricted Lists. This proposal includes “restricted” lists for both HASS and STEM that are restricted in the number of credits that a student can use to fulfill HASS and STEM requirements. These lists provide an opportunity for faculty to propose, and students to complete, courses outside the traditional HASS or STEM designations to meet a portion of the HASS and STEM requirements. STEM/non-HASS faculty can propose courses for the restricted HASS list that meet Goals 3, 4, 5, or 8. For example, a faculty member in environmental engineering could propose a course in sustainability that meets Goal 8. Students may take up to 3 credits of courses on the restricted HASS list with non-HASS prefixes. Samples of student work will be used for assessment of the goal. Conversely, HASS/non-STEM faculty can propose courses for the restricted STEM list. For example, a faculty member in Social Sciences could propose a course in the history of technology that engages students in a STEM topic. Students may take up to 4 credits of restricted STEM. However, restricted STEM courses will *not* be assessed for Goal 2. Courses for both restricted lists must be approved by the General Education Council.

2. COURSE DESCRIPTIONS:

No new courses are proposed by the General Education Council. New courses proposed by departments for HASS and STEM requirements would go through the normal binder process. New courses proposed to satisfy the HASS and STEM requirements would be reviewed and approved by the General Education Council.

3. RELATED PROGRAMS: Not applicable.

4. PROJECTED ENROLLMENT: All undergraduate students.

5. SCHEDULING PLANS: Not applicable.

6. CURRICULUM DESIGN:

CURRENT PROGRAM			
Year	Courses	Credits	Comments
1 CORE	UN1015 Composition (Goals 5 and 6)	3	Both courses offered both semesters
	UN1025 Global Issues or Modern Language Option (3rd semester) (Goals 3 and 6)	3	
2 CORE	Humanities/Fine Arts-2000 Core List (Goals 4 and 8)	3	Courses on these lists may also appear on the HASS list
	Social/Behavioral Science-2000 Core List (Goals 3 and 8)	3	
3- 4	HASS Electives	12	6 credits must be upper division
1-4	STEM requirement <ul style="list-style-type: none"> • 1 laboratory science course • 1 mathematics course • STEM electives 	16	STEM restricted
	Co-curricular requirement	3 units	
Total Credits	12 Core 12 HASS 16 STEM	40	

PROPOSED PROGRAM			
<i>Note: New requirements are in italics</i>			
Year	Courses	Credits	Comments
1 CORE	UN1015 Composition (Goals 5 and 6)	3	Both courses offered both semesters
	UN1025 Global Issues or Modern Language Option (3rd semester) (Goals 3 and 6)	3	
2 CORE	<i>Goal 4 List (Humanities/Fine Arts-2000 Core)</i>	3	Courses on these lists may also appear on the HASS list
	<i>Goal 8 List (Social/Behavioral Science-2000 Core)</i>	3	

3 and 4	HASS Electives (<i>Goals 3, 4, 5 or 8</i>) <ul style="list-style-type: none"> • <i>Communication/Composition 3 cr</i> • <i>HU or FA 3 cr</i> • <i>SS/EC/PSY 3 cr</i> • <i>Additional 3 cr</i> 	12	6 credits must be upper division <i>New HASS Restricted List CORE + HASS meets Michigan Transfer Agreement:</i>
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			<ul style="list-style-type: none"> • 2nd course in composition or 1 course in communications • 2 courses in humanities and fine arts from 2 disciplines (studio and performance classes don't transfer under MTA) • 2 courses in social sciences from 2 disciplines
1-4	STEM requirement (<i>Goal 2</i>) <ul style="list-style-type: none"> • 1 laboratory science course • 1 mathematics course • Courses in 2 science disciplines • STEM electives 	15	<i>New STEM Restricted List</i>
	Co-curricular requirement	3 units	
Total Credits	12 Core 12 HASS 15 STEM	39	

Under the revised program, as under the current requirements, transfer equivalencies will need to be identified that account for credits earned at other institutions and credits acquired through Advanced Placement courses.

7. **NEW COURSE DESCRIPTIONS.** Not applicable.

8. **LIBRARY AND OTHER LEARNING RESOURCES.** New courses proposed by faculty for HASS lists may require additional library resources. Emphasis on learning goal achievement may increase attendance at learning centers such as Mathematics and Multiliteracies Centers. It is difficult to predict the need for these resources with any precision.

9. **COMPUTING ACCESS FEE.** Not applicable.

10. **FACULTY RESUMES.** Not applicable.

11. **DESCRIPTION OF EQUIPMENT.** Not applicable.

12. **PROGRAM COSTS.** Although the number of credits is reduced by one credit, the requirement for a second course in composition or communication may require some additional resources for departments to meet this goal. Two replacement hires underway in Humanities may be sufficient to meet demand.

13. **SPACE.** Not applicable.

14. **POLICIES, REGULATIONS AND RULES.**

The General Education Council oversees the General Education program and is responsible for continuous improvement of the curriculum and assessment of student learning. The Council evaluates all proposed revisions to the general education curriculum for consistency with the philosophy and goals of General Education. It is responsible for monitoring the General Education curricular requirements, reviews all proposals for courses to satisfy these requirements, and oversees assessment of student learning in the program.

New Course Review. New courses proposed to satisfy the Core, HASS, STEM and co-curricular requirements are reviewed by the Council as part of the binder process. For core, HASS, and STEM courses, departments will now submit through the binder process a course proposal that includes (1) identification of the learning goal, a statement **with evidence** regarding how the goal will be achieved in the course, ~~and a specified assignment that can be used to assess the goal,~~ and (2) a syllabus for the course following Senate guidelines in which the learning goal is clearly identified as a course goal. The General Education Council may forward the proposal to the appropriate Goal Committee for review prior to approval.

Program Review. The Council will regularly review offerings to ensure that a sufficient number of courses are offered on a timely basis to meet HASS and STEM enrollment demands. There must be enough sections of approved courses to accommodate at least 1250 students per academic year, balanced between the semesters. The Council will also consult with departments about currency of offerings and a reasonable distribution of HASS courses across Goals 3, 4, 5, and 8. Courses which are not offered on a regular basis may be removed from the approved list of General Education courses.

15. **ACCREDITATION REQUIREMENTS.**

Michigan Tech's regional accreditor, the Higher Learning Commission, requires evidence of assessment of learning goals and reviews the role of General Education in achieving those goals.

16. **IMPLEMENTATION PROCESS AND PLANNED IMPLEMENTATION DATES.**

16.1 **Transition Issues.** During the transition period from approval to full implementation in 2015-6, the current HASS and STEM curricular requirements remain in effect. Students admitted prior to implementation of these changes will continue to follow current HASS and STEM requirements.

16.2 **Schedule of learning goal implementation:**

January 2014

Goal Committees for Goals 2, 4 and 8 are established. LEAP rubrics with definitions of goals are adapted and publicized by the end of March 2014.

April 2014	Departments submit lists of existing HASS courses with learning goals identified to the General Education Council.
May/August 2014	Learning Goal Workshops for faculty who offer HASS and STEM courses.
September 2014	HASS: Faculty offering a HASS course in fall 2014 submits the syllabus <i>by the first week of class</i> to the General Education Council. Syllabus should identify Goal 3, 4, 5, or 8 as a course learning goal. Assignment designated for assessment of the goal should be clearly identified and the rubric for assessment should be included or linked. General Education Council will forward syllabi to appropriate Goal Committee for review and feedback to faculty as needed.
December 2014	Faculty submit student work for assessment by Goal Committees.
January 2015	STEM: Faculty offering a course on the Math or Science lists in spring 2015 submits the syllabus <i>by the first week of class</i> to the General Education Council. Syllabus should identify Goal 2 as a course learning goal. Assignment designated for assessment of the goal should be clearly identified and the rubric for assessment should be included or linked. General Education Council will forward syllabi to appropriate Goal Committee for review and feedback to faculty as needed.
January 2015	HASS: Faculty offering a HASS course in spring 2015 <i>that was not offered in fall 2014</i> submit the syllabus <i>by the first week of class</i> to General Education Council. Syllabus should identify Goal 3, 4, 5, or 8 as a course learning goal. Assignment designated for assessment of the goal should be clearly identified and the rubric for assessment should be included or linked. General Education Council will forward syllabi to appropriate Goal Committee for review and feedback to faculty as needed.
May 2015	Faculty submit student work for assessment by Goal Committees. Goal Committees conduct assessment of student learning for all General Education goals. Faculty teaching HASS and STEM courses are invited to participate in the assessment process. Results and recommendations are reported to General Education Council.
2015-6	Repeat the process for all HASS and STEM courses not previously offered. By the end of 2015-6, most HASS courses should have been offered at least once and tagged with a learning goal.
2016-7	Registrar codes all HASS courses with learning goals. General Education Council reviews all results and recommendations to determine whether additional actions need to be taken to improve student learning in the General Education program for Goals 2, 3, 4, 5, 6 and 8.

16.3 Schedule of implementation of changes to General Education Curriculum:

Spring 2014	Learning goals for core courses are modified: Goal 4 for HUFA-2000 and Goal 8 for SBS-2000 courses.
Fall 2015	Changes to HASS and STEM requirements are implemented.

17. INTERNAL STATUS OF THE PROPOSAL.

This proposal was discussed at length by the General Education Council prior to approval. There have been ongoing discussions with faculty and chairs in Social Sciences, Humanities, and Visual & Performing Arts Departments, and Senate Fora on General Education and Assessment. The provost and dean of the College of Sciences and Arts have been briefed regularly on the proposal.

Approved by General Education Council	January 16, 2014
Reviewed by Deans Council	January 22, 2014
Reviewed by Provost	January 22, 2014
Reviewed by Senate Curricular Policy Committee	
Reviewed by Senate Academic Policy Committee	
Reviewed by Senate Finance Committee	
Approved by Michigan Tech Senate	

TABLE 1. PROPOSED GENERAL EDUCATION PROGRAM

Group	Course	Prerequisites	Assessment: Goal & Level	Michigan Transfer Agreement
Core 12 credits	UN1015 Composition 3 cr		5 Communication – Level 2 6 Information literacy – Level 2	1 course in English composition
	UN1025 Global Issues 3 cr or Modern Language Option		3 Global literacy and human culture – Level 2 6 Information literacy – Level 2	1 course in social sciences
	Goal 4 List (HUFA-2000 Core Courses) 3 cr		4 Critical and creative thinking	1 course in humanities/fine arts
	Goal 8 List (SBS 2000 Core Courses) 3 cr		8 Values and civic engagement	2 nd course in social sciences – 2 disciplines
HASS	Communication 3 cr minimum	∇ 1000- and 2000-level courses may have UN1015 or UN1025 as	Departments identify one USLG for each HASS course (goals may not vary)	2 nd course in composition or communications

12 credits ☞ At least 6 credits must be 3000- or 4000-level ☞ No more than 3 credits from the HASS restricted list (non HU/SS/FA/PSY/EC)	HU, FA 3 cr minimum	prerequisites, but prereqs are not required for these lower level courses	by section): ☞ 3 Global literacy and human culture ☞ 4 Critical and creative thinking ☞ 5 Communication ☞ 8 Values and civic engagement	2nd courses in humanities/fine arts – 2 disciplines
	SS, EC, PSY 3 cr minimum	☞ 3000- and 4000-level courses must have UN1015 and UN1025 as prerequisites	• 1000-2000 level courses will be assessed at a target level 2 • 3000-4000 level courses will be assessed at a target level 3	
	3 cr from any HASS list	☞ 3000- and 4000-level courses may have an additional prerequisite(s), but the prereq(s) must be on the HUFA 2000, SBS 2000 or HASS list.		
STEM 15 credits ☞ No more than 4 credits from the STEM restricted list	Mathematics list: 4 cr minimum Science list 7-8 cr minimum 2 courses <ul style="list-style-type: none"> • 2 disciplines • 1 must include an associated lab STEM restricted list 4 cr maximum		2 Knowledge of physical and natural world will be assessed at target level 3	1 course in quantitative reasoning 2 courses in natural sciences (2 disciplines) including one with a laboratory experience
Co-curricular 3 units	FA, AF/AR, PE			

TIMELINE TO IMPLEMENT GEN ED CHANGES

2013-4	2014-5	2015-6	2016-7
Implementing new General Education core	HLC Assurance Argument due	Michigan Transfer Agreement implemented	
All Goal Committees are implemented.	HASS courses offered are tagged with Goal 3, 4, 5 or 8 and student work is assessed by Goal Committees.	HASS courses offered are tagged with Goal 3, 4, 5 or 8 and student work is assessed by Goal Committees.	Results are reviewed to determine how best to assure that all Michigan Tech students achieve the USLGs adopted by the General Education program
Proposed HASS/STEM changes: If Senate approves changes to General Education this year, then...	Changes need to go through binder process in October so catalog can be distributed ...	and HASS & STEM changes can be implemented	
	If Senate approves changes to General Education this year, then...	Changes need to go through binder process in October so catalog can be distributed ...	and HASS & STEM changes can be implemented

Introduced to Senate: 26 March 2014

Friendly Amendment from General Education Council in Red: 7 April 2014

Friendly Amendment added in blue: 9 April 2014

Approved by Senate: 9 April 2014

Approved by Administration: 21 April 2014

[1] "Knowledge of human culture" was originally part of Goal 2 but was subsequently moved to Goal 3.

[2] T. Rhodes & A. Finley, *Using the VALUE rubrics for improvement of learning and authentic assessment*. AAC&U, 2013.