

Multi-State
Advanced Manufacturing
Consortium
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PRIMARY DEVELOPER: Innovation Team 4

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Document Summary

What it does: This document provides insight into the importance of improving colleges' ability to accommodate flexible scheduling options within a competency based environment. Students' ability to complete at their own pace, and a learner-centric program are key characteristics of competency-based education, which highlights the need for colleges to accommodate different types of scheduling (e.g. online courses, open labs, etc.).

Who it's for: College faculty and administration

M-S AMC Present and Preferred State:

PRESENT STATE ____ PREFERRED STATE ("New Model")

- Instructor dependent content
- Directed learner
- Pace of learning set by instructor
- Success grounded in hours & theory
- Lecturer / Subject Matter Expert (SME)
- Emphasis on (memory) recall

- Instructor <u>in</u>dependent content
- Self-directed learner
- Pace of learning set by skills acquisition
- Success grounded in <u>competence</u>
- SME / Mentor / Learning Process Expert
- Emphasis on information application





Develop a Procedure for Improving Flexible Scheduling

As colleges move towards designing and implementing competency based education programs flexible, learner-centric course scheduling options become increasingly important. A key feature of competency based education is that students should be able to progress at their own pace and demonstrate what they know, whether that knowledge was gained through prior coursework, on the job training, military or another learning experience.

"The point is to streamline the higher-education process so that programs are aligned, built in a logical sequence, are immersive and concentrated, hold electives to what is essential, and promote degree or certificate completion," said Harris N. Miller, president of the Association of Private Sector Colleges and Universities.

Key Characteristics of Competency Based Education

- 1. Students progress at their pace. A transparent system for tracking and reporting progress, flexible, learner-centric use of time, often beyond standard school day and year. Explicit methods for providing additional support or opportunities for learning.
- 2. Graduation upon demonstration of mastery of a comprehensive list of competencies. Courses designed around set of competencies aligned with industry needs. "Credit" awarded upon mastery of competencies associated with course or smaller module, based on summative assessments.
- 3. Faculty skilled at facilitating differentiated learning environments. Frequent formative assessments provide real-time feedback to students and faculty on progress toward competencies and help guide instruction. Development of robust approaches to supporting students as they move through competencies, especially those who progress slowly.

Experienced faculty identifies competency (knowledge and skill) requirements for degree and certificate programs and develops summative assessments that students will pass to demonstrate mastery of the competencies. Assessments can be tests, projects, and other activities used to measure knowledge.

Some assessments are based on tests and papers used in traditional classroom formats. Others require observations of demonstrations and other experiences. Once you pass an assessment, you will be able to directly and reliably demonstrate what you know to employers and others seeking your skills.





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Flexible Scheduling = Open Access

In a competency based education environment where students are enrolled in courses based on what they need to learn as opposed to the amount of time that they spend learning it. Flexible scheduling makes for a more exemplary learning environment because it restructures resources and optimizes time, space, and staff and accommodates varied curriculum offerings and teaching strategies.

Many colleges now offer courses during traditional daytime hours, in the evening, online and hybrid (a combination of classroom and online) to allow students to work or continue a professional career while pursuing an education.

Options for Delivery Methods and Flexible Schedules

• Online

Consists of taking classes via the internet. Online classes offer flexibility and convenience. Students can attend class sessions from the comfort of their home and complete assignments at almost any time of the day.

• Open entry / Open exit

Open Entry/Open Exit (OE/OE) courses provide an alternative to traditional classroom learning. OE/OE students have greater control over their learning schedules and can complete a course in several weeks, a month or a semester. Students do not attend regular classes or lectures. Students can complete these self-paced courses at home, in the college's computer labs, or in the OE/OE lab where instructors are available for help during posted hours. OE/OE learning may be appropriate for students who are independent learners, highly self-motivated and interested in accelerating their course of study. Enroll in a class at any time during the semester and complete required work at your own pace within the semester or by arrangement with the instructor.

• Self-paced on campus

Self-paced, generally means that students can start and complete competencies and assessments at a pace that they set, based on their knowledge, needs, schedule, and effort. Learning is not tied to the pace of other students. Students do not have to wait for the beginning of a traditional semester to start their education, and they can take assessments whenever they are ready. Students work on campus at their own pace with weekly faculty





Improving Flexible Scheduling

guidance. However, this can be modified to meet the specific needs of students, faculty and campus environment.

• Self-paced independent

Students work off-campus at their own pace using study materials prepared by faculty members.

• Traditional classroom

Students attend classes on scheduled days and times. Traditional instructor-centered methods focused on overemphasis on verbal answers, reliance on <u>rote memorization</u> (memorization with no effort at understanding the meaning), and disconnected, unrelated assignments.

• Traditional with computer

Students attend classes on scheduled days and times. These classes will require students to use the web or special software to complete assignments outside of the classroom.

Web and classroom

Students receive instruction in the classroom and on the web independently to reduce total classroom time.

• Web self-paced

Students work online at their own pace with materials prepared by faculty members and delivered over web.





• Alternative timeframes

There are a variety of alternative timeframes that can be employed, including 5, 8, 10, and 14-week classes, as well as weekend-only schedules.

Achieving concepts like "Flexible Scheduling", "Stackable Courses" and ""Latticed Courses" will require that everyone involved understands the reasons for doing it and how it can most easily done.

- 1. In one instance (in the case of a 3 Credit Course) an instructor must first separate the knowledge & performance objectives into three groups that would require 5 weeks to complete each. Every attempt would be made to identify and separate sequential components so that a proper determination could be made about what material requires a prerequisite and what material can be "latticed" (not requiring prerequisite knowledge). In this way a 3 Credit course might be divided into 3, 1 Credit courses delivered back to back or independently in the case of Online or Independent study.
- 2. For laboratory courses a student would be responsible to survey the college schedule, consult the instructor and join labs on an as available basis.
- 3. Another option, as long as course minimum registration would allow, would be for an instructor to actually schedule an "open lab" where a 4 credit course is conducted right in the lab (as long as facilities permit) in the delivery method suitable to accomplishing the objectives.

How about a Type "P" course where the Student is given the materials in an Independent study format along with the PBOs and is told to schedule his PBO Demonstrations with the instructor during the normally scheduled labs. I.E. and appointment in the times that the instructor is already in lab with students taking the course conventionally.

Types of Programs

- Credit Working toward a degree or certificate.
- Full Academic Year Credit Selected classes, often for special programs, that are scheduled to begin and end throughout the academic year.
- CEU Class Non-credit Professional / Continuing Education Unit (CEU) classes for professional development and career advancement.
- Non-credit Non-credit personal interest and professional development courses.





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