

Coordinating Board for Higher Education Principles of Best Practices in Remedial Education

1.0 Introduction

- 1.1 HB 1042, signed into law in 2012, requires all Missouri public institutions, under the direction of the Coordinating Board for Higher Education, to replicate best practices in remedial education. The law's primary objective is to improve student retention and increase educational attainment.
- 1.2 Earning a college degree requires students to possess certain skills, knowledge, and abilities in order to succeed in the postsecondary environment. While educating students is the primary mission of colleges and universities, implicit in that mission is helping students complete programs of study. Not completing a two-year or four-year college degree has dramatic financial implications to both the individual and the state. The lifetime earning potential of a person without a college degree is typically significantly less than an individual with a degree.
- 1.3 Not all students who enroll in college have the requisite skills and knowledge to attain a postsecondary credential (See section 7.0). In response, colleges and universities provide remedial or developmental education to prepare these students for academic success. Studies show that Missouri spends millions of dollars each year on remedial education and that students requiring remedial education are less likely than non-remedial students to persist from semester to semester or complete a course of study and earn a postsecondary credential. These same students use state and federal aid, or take out student loans. To provide remedial education institutions divert institutional resources from other programs and credit-bearing coursework.
- 1.4 The terms "developmental education" and "remedial education" are often used interchangeably. Remedial education typically refers to a student's academic preparedness for postsecondary education, seeking to remedy the lack of skills that students need for college entry, while developmental education addresses a more expansive set of learning challenges. According to the National Association for Developmental Education, developmental education is
- 1.5 a field of practice and research within higher education with a theoretical foundation in developmental psychology and learning theory. It promotes the cognitive and affective growth of all postsecondary learners, at all levels of the learning continuum. Developmental Education is sensitive and responsive to the individual differences and special needs among learners. Developmental Education programs and services commonly address academic preparedness, diagnostic assessment and placement, affective barriers to learning, and development of general and discipline-specific learning strategies.
- 1.6 Developmental courses are defined as education review courses aimed at strengthening the diverse talents of students, both academic and non-academic. Such courses also are

designed to review previous curricular areas of students who have not been involved in education for some time. In contrast, remedial education is defined as a duplication of secondary courses in basic academic skills, usually involving recent high school graduates or those students who did not complete their secondary curriculum.

- 1.7 HB 1042, as its language suggests, is directed primarily at academic preparedness. These guidelines are therefore focused primarily—but not exclusively—on efforts by institutions to address students’ lack of academic preparedness for postsecondary education.

2.0 Policy purpose and objectives

- 2.1 The purpose of this policy is to identify and implement best practices in the delivery of remedial education to enhance student learning, increase student persistence, decrease the time it takes for students to complete academic programs, make more efficient use of state resources, and hold institutions accountable for policy compliance.
- 2.2 The policy applies to all public two-year and four-year institutions of higher education, which are obligated to conform to the policies by the authority delegated to the CBHE by RSMo 173.005 (6). Independent institutions are also encouraged to adhere to these guidelines.

3.0 Statutory Authority

RSMo 173.005 (6): *The coordinating board for higher education shall require all public two-year and four-year higher education institutions to replicate best practices in remediation identified by the coordinating board and institutions from research undertaken by regional educational laboratories, higher education research organizations, and similar organizations with expertise in the subject, and identify and reduce methods that have been found to be ineffective in preparing or retaining students or that delay students from enrollment in college-level courses.*

4.0 Guiding Principles

- 4.1 The primary goal of this policy is student retention and increased educational attainment through degree completion.
- 4.2 The goal of developmental or remedial education is to prepare students for success in postsecondary education.
- 4.3 Ideally, all students would be prepared for the demands of postsecondary education upon graduation from high school, and that is an objective to which the P-20 education community aspires. At present, however, many high school graduates enter postsecondary education unprepared for entry-level coursework. To that end, Missouri institutions of higher education are committed to providing opportunities for underprepared students to attain the skills they need to succeed in college.

- 4.4 These efforts include, but are not limited to, outreach to the Department of Elementary and Secondary Education (DESE) to align standards, and to school districts to align curriculum. For these efforts to be successful, DESE and K-12 districts must become collaborative partners in the process.
- 4.5 Some states have prohibited four-year institutions from offering remedial education. CBHE will no longer prohibit selective and highly-selective public institutions from offering remedial coursework. This policy does not seek to limit remediation to a single sector but to work collaboratively to improve student learning outcomes and increase educational attainment.
- 4.6 Institutions of higher education have a responsibility to continually evaluate and improve their delivery of developmental education. Institutions must research and engage in instructional best practices within developmental coursework.

5.0 Guidelines for Best Practices in Remediation

- 5.1 The following have been identified by the CBHE and two-year and four-year institutions as “best practices in remediation,” based on research conducted and published by regional educational laboratories, higher education research organizations, and similar organizations with expertise in the subject.
- 5.2 It is incumbent on both higher education institutions and DESE to work collaboratively to make sure that high school programs of study line up to college-entrance expectations. More specifically, course-taking requirements for high school diplomas should be aligned with requirements for entry-level college courses. High schools should assess students’ basic skills prior to the 10th grade so that students who require remediation can receive instruction before entering public postsecondary education.
- 5.3 Secondary school curriculum and postsecondary curriculum must be aligned so that the completion of the high school curriculum transitions seamlessly to the beginning of the college curriculum. Specifically, high school exit outcomes need to be equivalent to college-level entry skills. Once in place, the high school and postsecondary curriculum must be reviewed periodically by an appropriate body (to be determined) to ensure the fidelity of the alignment.
- 5.3a At each institution, higher education faculty teaching remedial or developmental courses and those teaching gateway courses by content area should work collaboratively to create a seamless transition from developmental coursework to college-level coursework. Exit outcomes should be aligned with entry-level expectations. Discussion should include topics such as skill attainment and student success behaviors.
- 5.4 Institutions of higher education must assess the basic skills of all certificate- or degree seeking students, based on statewide minimum assessment standards for access to the college-level curriculum.

- 5.4a Accurate placement in appropriate coursework is key to student success. To improve accuracy, institutions must use multiple measures to assess student readiness for gateway courses and programs of study.
- 5.5 The completion of a set of gateway courses (see glossary for definition) for a course of study is a critical measure of success toward college completion. Remedial education should be designed to help students complete gateway courses in their course of study as quickly as possible.
- 5.6 The content in required gateway courses should align with a student's academic course of study — particularly in math. College algebra may be an appropriate gateway course for many academic programs, but it should not be the only mathematics pathway for students to earn a postsecondary certificate or degree. Students seeking degrees in non-STEM fields may be served better by other gateway courses such as statistics or geometry.
- 5.7 Institutions should explore alternate delivery methods (a.k.a course redesign) to move students into credit bearing courses as quickly as possible, to save students time and money. These methods should provide appropriate instruction to accommodate the diversity of their developmental and remedial students.
- 5.8 Students who are significantly underprepared for college-level academic work need self-paced, mastery-based routes into programs of study. Students who are marginally underprepared may benefit from alternate routes (e.g. co-requisite, bridge program, competency-based sequence) into a course of study.
- 6.0 CBHE Recommended College Preparatory High School Curriculum (proposed revisions in bold font)**
- 6.1 The CBHE, the Missouri Department of Higher Education (MDHE), Missouri postsecondary institutions, the Department of Elementary and Secondary Education (DESE), and the Missouri K-12 community share a common interest in promoting student preparation as a foundation of enrollment, retention, and success in Missouri postsecondary institutions.
- 6.2 Accordingly, with collaboration across educational sectors, the CBHE has established a recommended 24-unit high school core curriculum guideline for students who plan to enroll in a Missouri college or university. The CBHE 24-unit high school core curriculum is designed to prepare high school students for access to and retention/success in collegiate-level work. Students are expected to demonstrate competency in high school core content. Failure to do so may result in placement in developmental/remedial coursework at additional time and expense to the student.
- 6.3 The CBHE encourages governing boards at Missouri's postsecondary institutions to incorporate the 24-unit high school core curriculum into admissions processes for all first-time freshmen; however, admissions and placement decisions are ultimately made at the institutional level. Requirements vary for admission to Missouri institutions. For example, foreign language study is required for admission to some institutions. Students

are strongly encouraged to discuss admissions requirements and placement practices with staff at Missouri institutions in which they may be interested in enrolling. **The CBHE Recommended College Preparatory High School Curriculum** is recommended for full implementation beginning with the Missouri **college graduation class of 2018** (entering as college freshman in the Fall of 2014).

6.4 **CBHE Recommended College Preparatory High School Curriculum**

English/Language Arts - 4 units

Social Studies - 3 units

Mathematics - **4 units***

Science - 3 units

Fine Arts - 1 unit

Additional Coursework - 3 units **

Electives - 6 units ***

6.5 ***At least one mathematics course should be taken each year. It is particularly important that students take a mathematics course in grade 12.**

**Missouri public high school students are required by the State Board of Education to complete units in practical arts (1), physical education (1), health education (1/2), and personal finance (1/2)

***All students should complete at least 3 elective units total in foreign language and/or other courses within high school core content areas defined below. Two units of a single foreign language are strongly recommended.

English/Language Arts

- English/language arts coursework (4 units) emphasizes college preparatory composition, research skills, analysis of literature, and other content of comparable or greater rigor. Speech and debate courses may be included.
- Coursework not acceptable for the high school core curriculum emphasizes student publications, broadcast media, or theater.

Social Studies

- Social studies coursework (3 units) emphasizes American history, Missouri government and Missouri history as required by state statute, geography/world civilizations, and other content of comparable or greater rigor.
- Coursework not acceptable for the high school core curriculum emphasizes family/human development or consumer education.

6.6 **Mathematics**

- Mathematics coursework (**4 units**) emphasizes college preparatory algebra and other content of comparable or greater rigor. Students who complete algebra prior to the freshman year would be expected to complete **four** additional units in grades 9-12. **Students who achieve a proficiency score of 3 or 4 on the Smarter Balanced grade 11 assessment must demonstrate continued study of mathematics for the score to be considered valid in the first year of college.** Coursework that emphasizes pre-algebra,

computer math/programming, consumer/basic math, or business math/accounting is not acceptable for the CBHE Recommended College Preparatory High School core curriculum.

Science

- Science coursework (3 units) emphasizes college preparatory biology, chemistry, and other content of comparable or greater rigor. Science coursework should include at least one laboratory course.
- Coursework not acceptable for the high school core curriculum emphasizes general or consumer science.

Fine Arts

- Fine arts coursework (1 unit) emphasizes visual arts, instrumental or vocal music, dance, theater, or other content of comparable or greater rigor. Critical analysis, theory, or "appreciation" courses may be included.
- Coursework not acceptable for the high school core curriculum emphasizes speech, debate, or broadcast media.

For each high school core content area, descriptions follow that provide illustrations of coursework acceptable and unacceptable for the high school core curriculum.

7.0 College Readiness and College-Content Readiness

- 7.1 College readiness is a term frequently misused or misunderstood. Often, it is understood as shorthand for placement into credit-bearing (non-remedial) college courses such as English or mathematics. Readiness for postsecondary education encompasses a much broader array of skills, knowledge, and behaviors. They include, but are not limited to, sufficient content knowledge of various subjects, maturity, self-discipline, perseverance, and habits of mind such as problem solving, and the ability to observe, listen, and speak. Students with these skills, knowledge, and behavior are more likely to persist and obtain a postsecondary credential than students without these characteristics.
- 7.2 College-content readiness is defined as the level of preparation a student needs to succeed in specific credit-bearing courses in college—such as English or mathematics—without the need for remediation. “Succeed” is defined as completing entry-level courses at a level of understanding and proficiency that prepares the student for subsequent courses. The guidelines in this policy are aimed at college-content readiness in English, mathematics, and reading.
- 7.3 Missouri postsecondary institutions have a shared understanding of what constitutes college readiness and college-content readiness. The higher education community recognizes the need to define readiness for college clearly and consistently so that students contemplating postsecondary education should not have to sort through conflicting definitions and expectations of what constitutes readiness for college.
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8.0 Career Readiness

8.1 Career readiness is the level of preparation a high school graduate needs to proceed to the next step in a chosen career, whether that is postsecondary coursework, industry certification, or entry into the workforce. According to the Association of Career and Technical Education (ACTE), career readiness includes core academic skills and the ability to apply those skills to concrete situations to function in the workplace and in routine daily activities. Employability skills and technical, job-specific skills related to a specific career pathway are essential in any career area.

9.0 Assessment and Placement

9.1 The statewide placement policy [currently under development] is applicable to any incoming student entering a Missouri public postsecondary institution. All certificate- or degree-seeking students should be assessed in mathematics, English, and reading.

9.2 Placement of students into appropriate college-level courses must be based on multiple assessment measures, which provide a more precise measurement of a student's ability to succeed in college-level coursework. Institutions may use an array of assessment instruments to place students in college-level courses, including—but not limited to—SAT or ACT scores, high school grade point average, high school end-of-course examination scores, or an institutional created assessment instrument. An institution opting to use one of the assessments listed below to place students in college-level courses shall adhere to the statewide placement score. This table will be reviewed annually once Missouri data are collected. Placement scores may be adjusted higher or lower based on empirical data of student performance in college mathematics and college writing courses.

Assessment Instrument	Subject Area	Statewide College-Level Placement Score
Accuplacer	Reading	85
Accuplacer	English	92 (Sentence Skills)
Accuplacer	Mathematics	114 (Arithmetic)
	Mathematics	116 (Elementary Algebra)
ACT	Reading	18
ACT	English	18
ACT	Mathematics	22
Asset	Reading	42
Asset	English	43
Asset	Mathematics	47 (Numerical Skills)

	Mathematics	46 (Elementary Algebra)
	Mathematics	43 (Intermediate Algebra)
	Mathematics	39 (College Algebra)
Compass	Reading	80
Compass	English/Writing	70
Compass	Mathematics	74 (Pre-Algebra)
	Mathematics	50 (Algebra)
	Mathematics	54 (College Algebra)
SAT	Reading	360
SAT	English	430 (Writing)
SAT	Mathematics	1030 (CR+M)
Smarter Balanced	English/Language Arts	3
Smarter Balanced	Mathematics	3

Placement scores will be valid for a minimum of two years. Scores may be considered valid for longer than two years at an institution's discretion.

9.3 Institutions of higher education should work closely with secondary schools to administer college-ready anchor assessments in high school. These tests give students, teachers and parents a clear understanding about whether a student is on track for college. Giving these assessments as early as 10th grade enables juniors and seniors to address academic deficiencies before college. Educators can use these on-track assessments to develop targeted interventions. K–12 systems and local community colleges or universities can develop programs that guarantee that successful students are truly college ready and exempt from remedial education as freshmen.

9.4 It is important that the content in required gateway courses align with a student's academic course of study. This is especially true for mathematics. More often than not students are placed in algebra pathways when in fact a statistics course or quantitative math course would be more appropriate to prepare them for their chosen programs of study and careers.

10.0 Minimum Standards of Academic Competence

10.1 The needs of students requiring remedial or developmental education is broad, ranging from deficiency in a single subject area to a lack of basic literacy skills. With proper

academic support, students needing remediation in a single subject have a good chance of earning a postsecondary credential. Students who are severely underprepared have little, if any, chance of earning a postsecondary credential in a timely manner. Therefore, students wishing to take credit-bearing college-level courses at a Missouri public institution of higher education must demonstrate a minimal level of literacy and academic competence, as determined through appropriate and multiple assessments of learning.

- 10.2 The intent of this section is to require students to demonstrate a minimal level of literacy and academic competence before they can enroll at a Missouri public institution of higher education as a degree-seeking student. Remedial education is essential to Missouri achieving its goal of increased educational attainment. Too often, however, open enrollment institutions are expected to enroll students who lack even the most basic of literacy and academic skills. It is unreasonable to expect a student who has limited academic preparation to have success in college even with cutting-edge remedial coursework. It is equally unreasonable to expect an institution to close the gap in a student's academic preparation through a one- or two-semester remediation sequence.
- 10.3 Until students demonstrate a minimum level of literacy and academic competence, they may enroll only in non-credit-bearing classes.
- 10.4 As with placement into credit-bearing college-level coursework, the assessment of minimum level of literacy and academic competence must be determined through the use of multiple measures. The MDHE, in collaboration with the public institutions of higher education, will jointly work to determine appropriate measures. This threshold will be reviewed annually once Missouri data are collected. Placement scores may be adjusted higher or lower based on empirical data of student performance in college mathematics and college writing courses.
- 10.5 Students who score just above the Statewide Degree-Seeking Placement Threshold scores need concentrated routes into programs of study with multiple-levels of support.

Students who score below the Statewide Degree-Seeking Placement Threshold should be referred to other state-funded educational opportunities (i.e. Adult Education and Literacy) before being retested for admission as a degree-seeking student.

11.0 Accountability and Data Reporting

- 11.1 Any institution that provides basic skills courses shall collect data regarding student performance, including but not limited to data that describes the students who take basic skills courses, the school districts from which said students graduated, the year in which they graduated, the basic skill areas that required remedial instruction, and the credit hours earned in remedial courses.
- 11.2 All institutions providing basic skills courses shall submit the required files to the Missouri Department of Higher Education, following its prescribed data definitions and

reporting dates. Precise reporting instruments will be developed in collaboration with institutions.

- 11.3 The CBHE shall transmit annually an analysis of data to appropriate state level bodies. Precise data needed shall be determined by an appropriate body and/or discussions with institutions. Following are some examples of possible data to be collected:
- The number of students who take basic skills courses,
 - The costs of providing basic skills courses, and
 - The students who successfully complete said basic skill courses:
 - Successfully complete the associated, entry, college-level course.
 - Complete the requirements for graduation.

12.0 Implementation and Evaluation of Program Innovation

- 12.1 Institutions need to identify new strategies and interventions that can increase student and institutional performance in developmental education.
- 12.2 Meaningful data collection and precise analysis should be used to assess the effectiveness of developmental education programs.

Instructors should complete course assessments on regular, periodic intervals that evaluate success of student learning objectives. Results will be used to improve instruction, assessment, etc.

- 12.3 A program review for remedial or developmental education should be completed that includes intermediate measures and milestones that developmental education students must pass en route to final success measures like graduation and transfer should be established. As a result, it is important to understand further the relationship between intermediate measures and final success, e.g. graduation, transfer, and persistence toward a credential. Furthermore, performance incentives, e.g. performance funding, can drive institutions to focus on helping their students meet state developmental education goals.

13.0 Process and Procedures

- 13.1 In order to comply with sections [to be determined with final draft] and [to be determined, if necessary, with final draft] of this policy, each institution shall develop procedures that:
- a. Specify the test administration policy, including dates and location or test administrator (e.g., contract with another college).
 - b. Specify its practices for informing students regarding the availability of remedial courses, including any online courses.
 - c. Specify the practices for determining how the students who are identified as needing remedial courses have satisfied the remedial requirements.
 - d. Provide any financial information, including FTE generated by remedial courses and program costs, following prescribed data definitions and formats.

- e. Establish appropriate processes for implementing the policy, including the collection of data for evaluative purposes.
- 13.2 Pursuant to RSMo, 173.750, MDHE must provide a high school feedback report to Missouri school districts on remediation of their recent high school graduates. For that report, recent high school graduates are defined as degree- and non-degree-seeking undergraduates who
- have graduated from a Missouri public or private high school (or its equivalent) during the previous academic year; or
 - are 17, 18, or 19 years of age if year of high school graduation is not provided by the higher education institution. Age will be calculated as of September 15 of the specified fiscal year.
- 13.3 The high school feedback report also will:
- Utilize a wide range of performance indicators to assess each step in the remedial student's pathway in order to gain a better understanding of students and their needs.
 - Support the public reporting of student progress and success from high school and noncredit into developmental education and through postsecondary education.
 - Use performance data to drive policy development and decision making, measuring the use of such data for this purpose on a continual basis.
 - Support colleges' institutional research capacity to track student performance and programming innovation in developmental education.
 - Provide a means to disseminate results of program assessment and best practices in developmental education to its colleges and other states.

14.0 Funding

- 14.1 The state of Missouri has committed to increasing the educational attainment of its citizens. Specifically, the state seeks to have at least 60 percent of the adult population holding a high-quality postsecondary credential. To reach that goal, Missouri must make appropriate investments in education, including those students who are underprepared for postsecondary work.
- 14.2 To that end, the state should consider the following:
- 14.3 Provide financial incentives to stimulate increased collaboration between secondary and postsecondary educational sectors to increase the college readiness of students.
- 14.4 Provide financial incentives to colleges for experimenting with innovative programs—flexible structure, delivery—to accelerate the path through and success in developmental education for students.
- 14.5 Reward colleges for making measurable improvements with academically underprepared students.

- 14.6 Support the success of academically underprepared students by providing funding specifically for tutoring, counseling and advising, and other learning assistance and support services that demonstrate success in retaining academically underprepared students.
- 14.7 Provide funding to secondary teacher education programs to explicitly focus on the development of skills needed to work with and support academically underprepared middle and high school students.
- 14.8 Support initial training and ongoing professional development of educators (both full-time and adjunct faculty) who work with and support the success of academically underprepared college students.

15.0 Definitions

15.1 Developmental education

Developmental education is a field of practice and research within higher education with a theoretical foundation in developmental psychology and learning theory. It promotes the cognitive and affective growth of all postsecondary learners, at all levels of the learning continuum. Developmental Education is sensitive and responsive to the individual differences and special needs among learners. Developmental Education programs and services commonly address academic preparedness, diagnostic assessment and placement, affective barriers to learning, and development of general and discipline-specific learning strategies.

15.2 Remedial education/remediation

Remedial education refers to coursework and programs designed to remedy a situation; that is, to teach students what they should already have learned. Remedial education seeks to improve the skills of underprepared students, both traditional and non-traditional, so that they may be successful in entry-level, credit-bearing courses.

15.3 Gateway course

A gateway or entry-level course refers to those college-level or foundational courses that are typically taken in a student's first year of study. Gateway courses carry college credit and count towards the requirements of a degree.

15.4 Placement

Placement refers to the tools and policies institutions use to assign incoming students to certain classes or programs that are suited to the student's academic readiness and ability. The most common placement decisions are in mathematics, English, and reading.

15.5 First-Time Undergraduate

As applied in this policy, a first-time undergraduate is a student enrolling in a higher education institution for the first time with no previous postsecondary experience. Enrollment in personal enrichment or vocational courses is not considered previous postsecondary experience. Prior enrollment as a high school student concurrently

enrolled in a higher education institution does not preclude a student from being categorized as first-time.

Three groups of students are included in the definition of first-time undergraduate unless exempted below:

- i. first-time, degree-seeking undergraduates;
- ii. non-degree-seeking undergraduates who change to degree-seeking status;
and
- iii. non-degree-seeking first-time undergraduates who have graduated from a Missouri public or private high school (or its equivalent) during the previous academic year.

15.6 *Exempt students*

Students who have completed either a college-level mathematics and college-level writing course or a remedial course (if required) in mathematics, writing, and reading are exempt from placement assessments that determine placement into non-credit-bearing remedial or developmental courses.

15.7 *College level courses*

Courses that apply to the graduation requirements of an academic degree.

15.8 *Assessment Tests*

Missouri accepts the assessment instruments listed below [currently being developed] for determining if the first-time student is college ready in mathematics, writing, and reading based on relevant cut scores.