



FINDINGS FROM ANALYSIS OF MATH V03 SYLLABI

By the Center for Urban Education

This document outlines the findings of the Center for Urban Education's Analysis of Math V03 Syllabi, which were conducted by staff and doctoral students at the USC Rossier School of Education, Center for Urban Education between December 2013 and March 2014.



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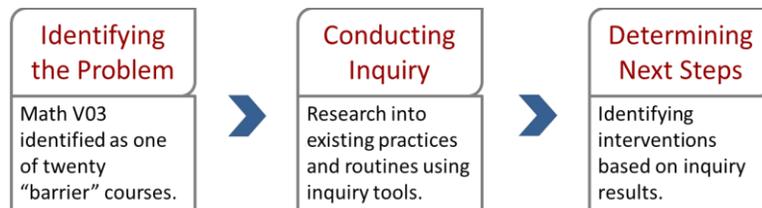
WHY SYLLABI REVIEW

Reviewing syllabi creates an opening into the typically private space of teaching. The purpose of this opening is to foster a critical reflection on existing pedagogical beliefs, practices, and values, particularly as they relate to the learning and success of underrepresented racial minority students.

INQUIRY

The diagram below presents a general overview of the work taking place at Ventura College. This work has the specific goal of improving the educational outcomes of underrepresented minority students, so that they are on par with students who are performing at the highest levels. At the Center for Urban Education (CUE), we call this work, “achieving equity.”

FIGURE 1: INQUIRY PROCESS



Achieving equity is a vital goal for all educational institutions, but it is not one that is easily achieved without specific target areas, strategies and focused efforts. At Ventura College, twenty “barrier courses” have been identified, of which Math V03 is one.

Once a problem has been identified, the next phase of the work is to better understand why that problem exists. In this case, the problem centers on why Math V03 is a barrier course. CUE’s approach is to examine what practitioners currently do in their daily work that may have an impact on students’ experience at an institution. This phase of the work is called “conducting inquiry.” Although the focus of an inquiry process is on what practitioners do, an important feature of inquiry is to try and see the institution from a student’s perspective.

Thus, the question that guided the overall inquiry process, of which the syllabi review is one piece, is: “How do Ventura College students experience Math V03?”

METHODS

Sample: 20 Math V03 syllabi from Spring 2013, Fall 2013, and Spring 2014

Process: 1) CUE researchers reviewed 2 syllabi, then discussed observations, interpretations, and analytic process.

2) The remaining 18 syllabi were randomly divided among the researchers.



3) Once analysis was complete, researchers discussed group-level findings and determined how to present the results.

WHAT’S IN A MATH V03 SYLLABUS?

Early in the examination of the syllabi, it became apparent that there was a wide variation in the content contained in the 20 syllabi. Figure 2 is a “bird’s-eye-view” of that analysis. The first column lists the different elements in the syllabi and the numbers at top are the random numerical identifiers given to each syllabus. The blue boxes indicate that a particular element was included in a syllabus.

FIGURE 2: SYLLABI CONTENTS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Instructor name	Blue																			
Contact information	Blue																			
Office hours	Blue																			
Course number	Blue																			
Course name	Blue																			
Course description	Blue																			
Course pre-requisites	Blue																			
Learning outcomes	Blue																			
Core competencies	Blue																			
Learning objectives	Blue																			
Textbook	Blue																			
Course materials	Blue																			
Course schedule	Blue																			
Course requirements	Blue																			
Method of instruction	Blue																			
Grading scheme	Blue																			
Grading percentages	Blue																			
Attendance policy	Blue																			
Cell phone policy	Blue																			
Expected class behavior	Blue																			
Academic dishonesty	Blue																			
Accommodations	Blue																			
Important dates	Blue																			
Tutoring / support services	Blue																			
MyMathLab information	Blue																			
How to be successful	Blue																			

What this chart reveals is that basic elements such as the instructor’s name, contact information, and course name and description are on each of the 20 syllabi. Other elements, however, are less common. For example, only three syllabi included some statement on the professor’s method of instruction. Only six syllabi included a statement on how students can be successful in the course. A quarter of the syllabi did not include information on the tutoring and support services offered at Ventura College.



What this chart does not convey is the style in which the information is presented. If two syllabi included information on expected class behavior the manner in which the syllabi conveyed that information differed. The remainder of this report examines the syllabi elements in relation to student-centeredness.

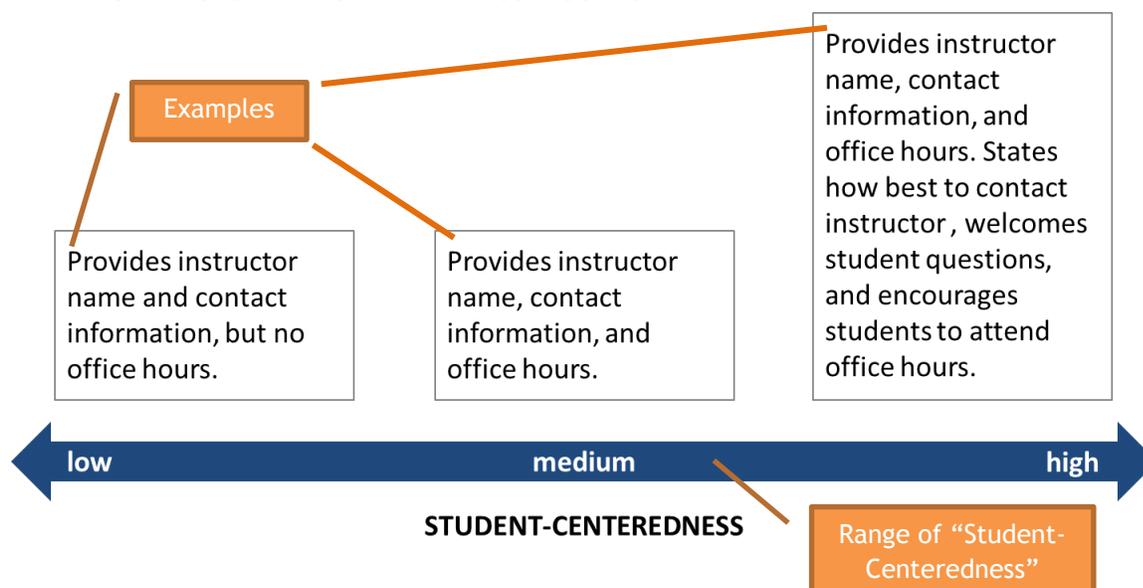
DEGREE OF STUDENT CENTEREDNESS

The following figures show the level of student-centeredness for each syllabus item. The elements listed in left-hand column of Figure 2 have been grouped into eight logical categories.

- Instructor Accessibility
- Course Description
- Grading Policies
- Class Policies
- Academic Support and Resources
- How To Be Successful
- Language and Tone
- College Policies

“Low”, “medium”, or “high” were determined by examining the range of variation across the syllabi. They are relative determinations since they depend on what was present in the syllabi reviewed. For example, “low” is relative to “high” and vice versa. Following the figures are examples from the syllabi that help explain the ranking.

READING THE STUDENT-CENTEREDNESS FIGURES



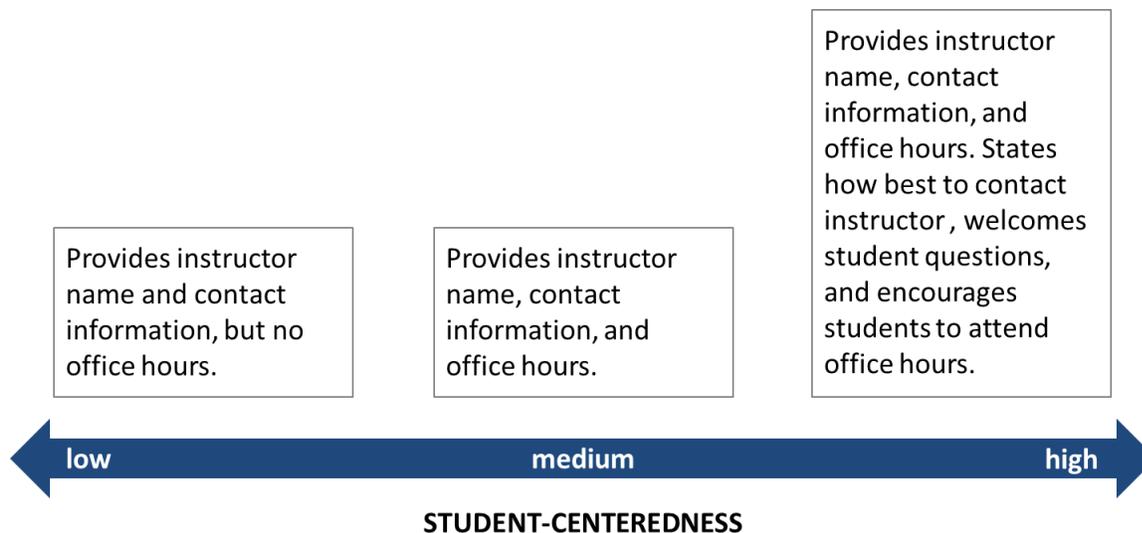


INSTRUCTOR ACCESSIBILITY

ELEMENTS: Instructor name, office hours, contact information

In this category we defined “low” as a syllabus that includes instructor name and contact information, but nothing on office hours. “Medium” syllabi include name, contact information, and office hours. “High” syllabi have these three things, plus statements on how students should contact the instructor and encouragements to ask questions and attend office hours.

FIGURE 3: INSTRUCTOR ACCESSIBILITY STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “high.”

- “The best way to contact me is by email: [email address].”
 - This comes from a syllabus that had all forms of instructor contact information, but nonetheless, the instructor made a point of saying how best to reach him / her.
- “You can see me for assistance during office hours (I am available Monday through Thursday and HIGHLY RECOMMEND you stop by.)”
- Please be aware that if you cannot make my office hours, I am happy to help you outside of class. Also, please email me questions. I use a smart pen that allows me to send you hints, which will play as a video, showing the problem being worked and explained by me.



COURSE DESCRIPTION

ELEMENTS: Description, student learning outcomes, core competencies, learning objectives

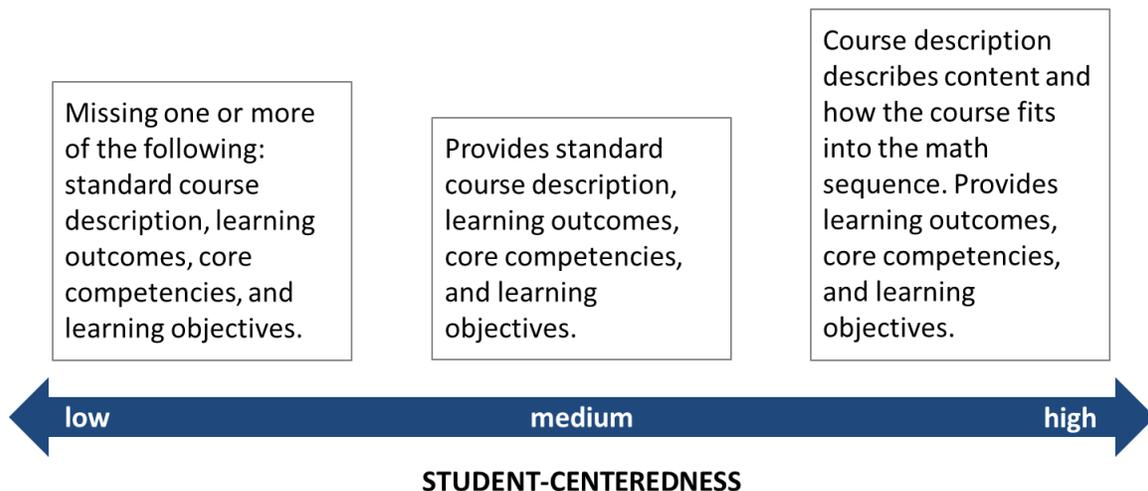
Courses that contained all four elements: description, student learning outcomes, and core competencies, learning objectives, were ranked “medium.”

Those syllabi in the “high” category are those that gave some indication of how the course fits into the broader sequence of courses at Ventura College.

Notably, all of the elements in this category—course description, learning outcomes, core competencies, learning objectives—are written in rather formal and technical language. These elements may be institutionally defined and determined, which is why the learning outcomes, for instance, were the same across the syllabi.

One of the prompts in the protocol encourages CUE to look for ways that syllabi can connect learning in the classroom with students’ lives. Although we acknowledge that there might not be room to change these elements, particularly if they are institutionally defined, perhaps there are ways to convey in other parts of the syllabus how math can apply to students’ lives, particularly for those students who are racial and ethnic minorities.

FIGURE 4: COURSE DESCRIPTION STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “medium” and “high.”



Medium

- “This course covers equations and inequalities, systems of equations using matrices, exponents and radicals, complex numbers, functions and graphs, quadratic equations, conic sections, exponential and logarithmic functions.”
- “This is a 5-unit course that covers equations and radicals, complex numbers, functions and graphs, quadratic equations, conic sections, exponential and logarithmic functions.”

High

- “This course is designed to cover the more advanced concepts in algebra and to provide an understanding of the use of more complex mathematical models. The course forms a basis for further studies in higher level mathematics courses such as Math 4, 5, 38, 40, 44, 45 as well as courses in technology and the sciences.”
- “This is an intermediate algebra course that uses beginning algebra concepts and prepares students for college algebra and pre-calculus courses. The course will cover Chapters 2 through 10. If time permits, some of Chapter 11 will be covered.”



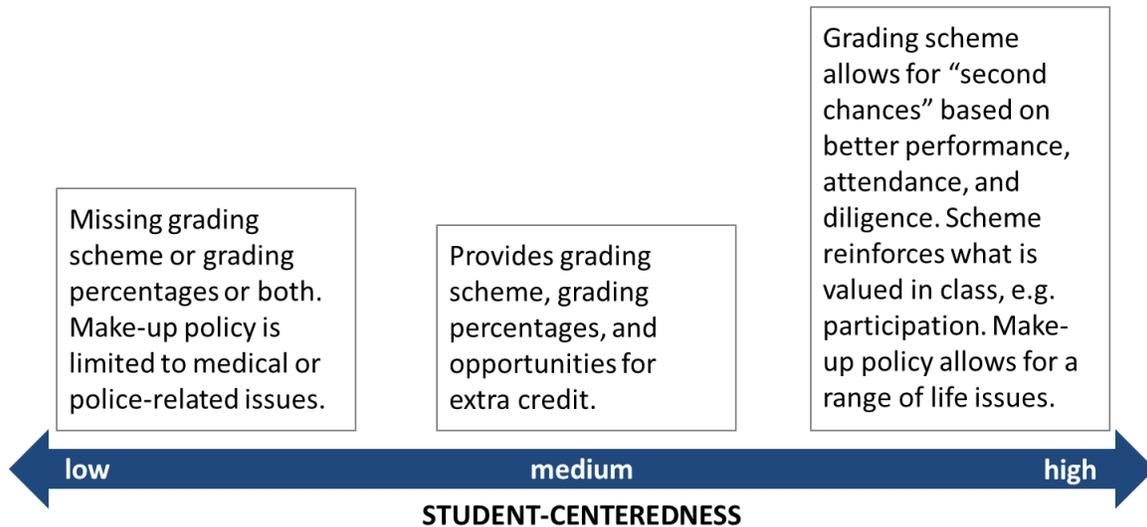
GRADING POLICIES

ELEMENTS: Grading scheme, make-up policies, extra credit

There was quite a bit of variation in this category, from the language and tone used to describe the policies, to the policies themselves. On the “low” end, there were syllabi that did not include a grading scheme or percentages. Also, the ability to make up work was contingent on having an official excuse sanctioned by either a doctor or police.

Syllabi on the “high” end incorporated some flexibility into these policies. What made them stand out was how the grading policies seemed to reinforce learning, rather than simply performance or getting good grades, as a value.

FIGURE 5: GRADING POLICIES STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “low” and “high.”

Low

- “Missed exams can only be taken late with a doctor’s note or police report confirming your reason for missing the exam.”

High

- “If you are absent you can only make up a quiz with a doctor’s note or evidence of another serious issue.”



- “You can override this grading plan by replacing the entire plan with your final exam grade. In other words if you score 90% on the final, you will automatically earn an A. ... There is one caveat to this plan. This deal is available only to the students with at least 90% of the participation points.”



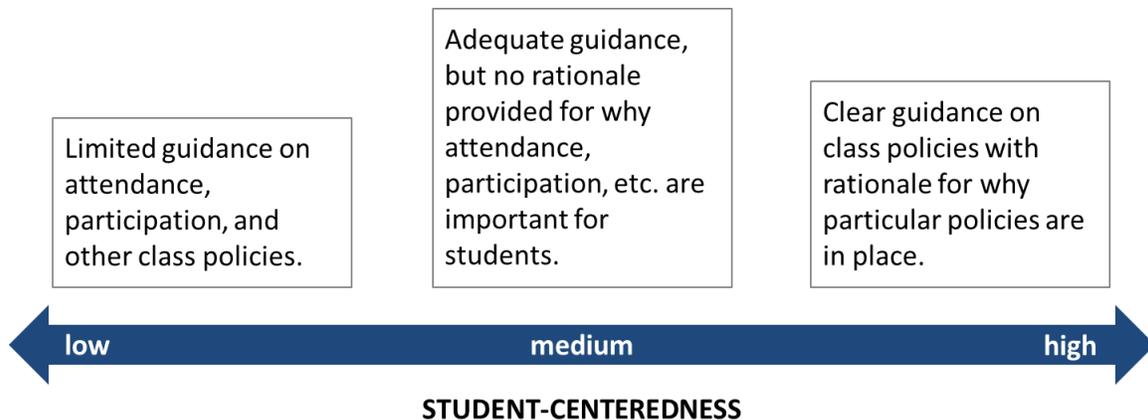
CLASS POLICIES

ELEMENTS: Attendance, cell phone, participation policies

Syllabi ranked “low” provide little guidance and requirements like attendance are incentivized through grades, not learning. “Medium” syllabi offer more information, as well as encouragement to participate in class.

“High” syllabi are quite different in that they provide students with a window into the instructor’s thinking about why certain policies are in place. In the syllabus example below the figure, the instructor states why the use of various technologies and having side conversations are not conducive to learning in the classroom. It is clear that these policies are in place because they benefit the whole class. The instructor is not assuming that students know why it is important not to have sidebar conversations while class is in session.

FIGURE 6: CLASS POLICIES STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “low,” “medium,” and “high.”

Low

- Attendance is noted only in reference to possible extra credit points, suggesting that it is tied to good grades only, not necessarily learning.

Medium

- “Class participation is encouraged during class discussions and questions. Extra credit may be earned through classroom participation.”



High

- “The classroom is a special environment in which students and faculty come together to promote learning and growth. In this learning environment it is essential to respect the rights of others seeking to learn and respect the professionalism of the instructor. **Computers, iPods, cell phones, text messaging and excessive chatting** are highly distracting and can disrupt the thoughts of both members of the class as well as your instructor. As a courtesy to everyone in the room, use of cell phones (including texting) in the classroom is not permitted at any time (except emergencies or instructor approval). If there is an important reason to use it during class, let me know prior to the beginning of class, and step outside of class to use it.”



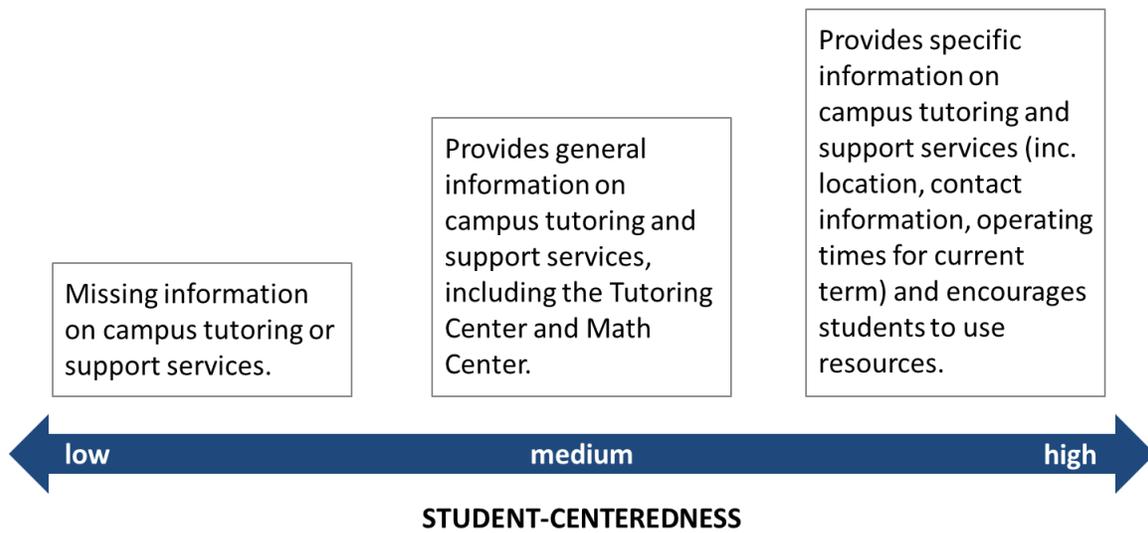
ACADEMIC SUPPORT AND RESOURCES

ELEMENTS: Information on math center, tutoring center, supplemental instruction

There was variation in whether syllabi reference the various academic support services on campus. Some syllabi make no mention of these services, while others provide some basic information on what services are available and where they are located.

The ones that received a “high” rank explicitly encourage students to utilize these support services, provide information that is current for the specific term, make clear that these services are free, and provide some indication of the benefits of utilizing these services.

FIGURE 7: ACADEMIC SUPPORT AND RESOURCES STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “medium” and “high.”

Medium

- “The Tutoring Center is dedicated to providing academic tutorial support for Ventura College students. The Center’s goal is to help make a students’ educational experience a successful one. Drop-in, group and individualized tutoring are available free of charge to all Ventura College students.”
- “There are additional sources of help at Ventura College outside of class. The Math Center (SCI 223) provides free tutoring services. Tutoring is also available in Learning Resource Center. If you need help outside of class or if it necessary for you to miss class, be sure to use these resources.”



High

- “I HIGHLY RECOMMEND you attend our Student Instructor (name) sessions for assistance with all topics covered in this class. Students also have an opportunity to receive FREE math tutoring and homework assistance at the Tutoring Center. Students enrolled in this course are encouraged to use the Tutoring Center to support their efforts in this class. The Tutoring Center is located on the first floor of the Library. Tutors are available for all levels of math in the Tutoring Center in the LRC building. For more information, call (805) 289-6026. Tutor Center hours for Spring semester 2013...”
- “There will be a supplemental instruction in this class. You are STRONGLY RECOMMENDED...the passing rates for students who attend...60%...so it will make a huge difference if you attend”



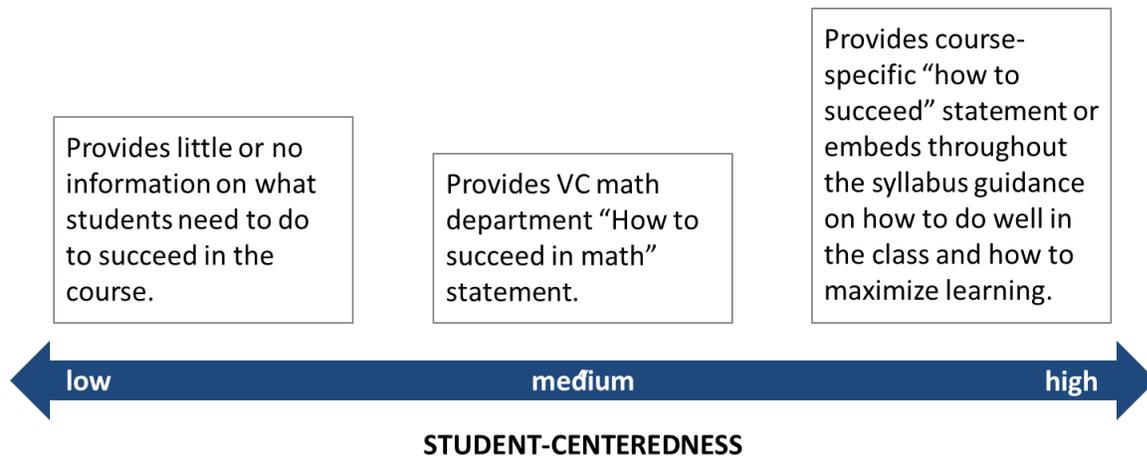
HOW TO BE SUCCESSFUL

ELEMENTS: Statements on how to succeed in class

Whether, and to what extent, syllabi included a statement on how to succeed in the course also varied across the 20 syllabi. “Low” syllabi make little or no mention of what students need to do to do well in the class. “Medium” syllabi included the How to Succeed in Math statement that was created by the department.

“High” syllabi may not have included the *How to Succeed in Math* statement, but embedded throughout the syllabus are specific things students can do to advance their learning and performance. For example, in one syllabus, the instructor explicitly articulates why homework is important to students’ overall learning in the course. The instructor makes a clear distinction between learning for understanding and simply wanting to do well in the course. The instructor also provides useful tips in how to tackle the homework.

FIGURE 8: SUCCESS STATEMENT STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “high.”

High

- “As you solve the homework exercises, I encourage you to treat them as a learning opportunity. The most successful students are those that practice the homework exercises (do the assignments), understand how to solve the exercises and why the procedure is used. The student whose primary focus is on simply getting the right answer is frequently shortchanged and typically has weak performance on exams. There is a huge difference between thinking through solving exercises and mechanically cranking



out answers. Thoughtful practice (doing the homework) everyday helps to reinforce concepts presented in class. I encourage you to spend 2-4 hours on math in between each of our class meetings. Many students find a lot of success in breaking up those hours into 20 or 30 minute increments. If you have an hour break in your daily schedule, please consider doing at least 30 minutes of homework during that time.”



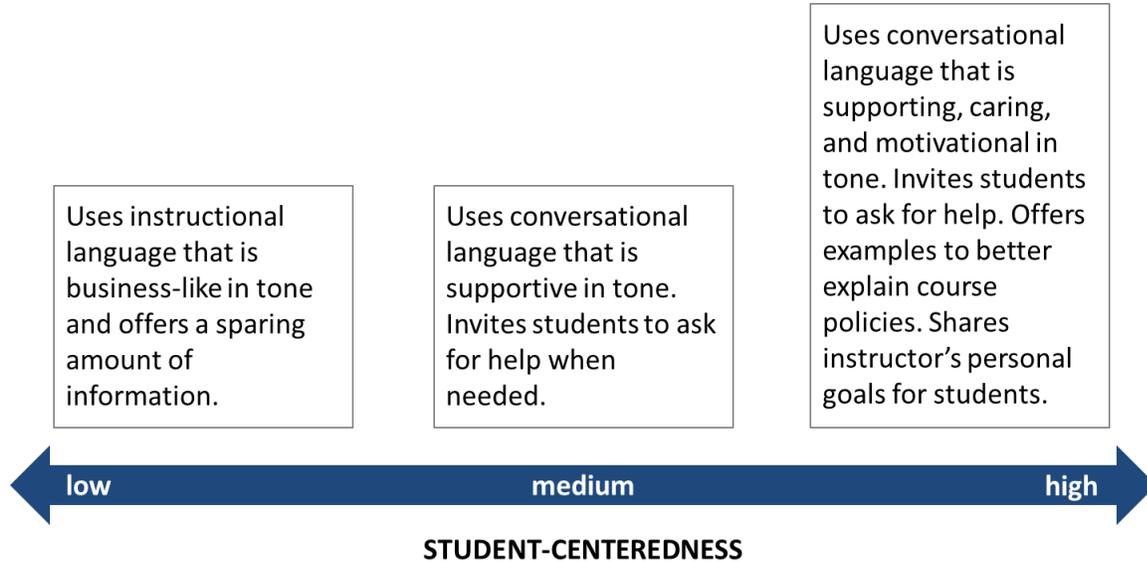
LANGUAGE AND TONE

There is a large amount of variation in the language and tone employed in the syllabi examined. In general, “low” syllabi used instructional or what we characterized as “business-like” language. In some ways, the “low” excerpts are fine, particularly since they clearly communicate what students need to do.

When compared to syllabi at the “medium” level, there are distinct differences in language and tone that could affect what students take and interpret from the syllabi. For instance, “low” syllabi are not personal at all. The instructor is referred to in the third person, as the instructor. In contrast, “medium” syllabi include the use of “I”, which could suggest a more relational approach to teaching.

Finally, “high” syllabi use a supportive, caring, and motivational tone. In the example, the instructor is sharing how math could be useful beyond the clear boundaries of the class. In both subtle and direct ways, the instructor is trying to shift the way the course might be seen by students. Thus, rather than simply a course in a sequence that students need to pass in order to move to the next course, this course is about learning a way of understanding the world.

FIGURE 9: STUDENT CENTERED LANGUAGE AND TONE



EXAMPLES

The following examples are from practices that were ranked “low,” “medium,” and “high.”



Low

- **“CELL PHONES OFF PLEASE. If there is an emergency and you need to use your phone, please ask for permission and step outside. TEN points will be deducted for any instance of using phone in the classroom.”**
- “Homework will be done online using MyMathLab. See instructor immediately with difficulties accessing online homework. All homework should be completed outside of class time. Homework is considered due at the time of the exam.”
- “There will be chapter tests two hours in length, closed books and open notes. The final exam will be two hours in length. A missed test is considered a zero.”

Medium

- “As your instructor, I will give individual help to those who want clarification of the concepts on which they are currently working. Please never hesitate to ask for clarification when needed.”
- Evening office hours I provide for my evening Calculus class, but you are welcome to come work on homework and ask for help.
- “Use of cell phones/notebooks/laptops or anything else that might distract you or other students in the classroom is not permitted at any time. If there are circumstances that require a waiver of this rule, inform the instructor at the beginning of class.”

High

- “Mathematics is fun. It is an extraordinary subject with limitless applications. ... My goals for you are threefold. The first is that you learn and understand the material we cover in class. The second is that your confidence in your mathematical ability increases. The third is that you come to enjoy and appreciate the amazing capabilities mathematics has to transform our understanding of the world. It is my sincere hope that this course offers you a glimpse into the awe and wonder that can be found in mathematics. Determination, perseverance, and hard work are your tools for success in this class. Best wishes for you!”



COLLEGE POLICIES

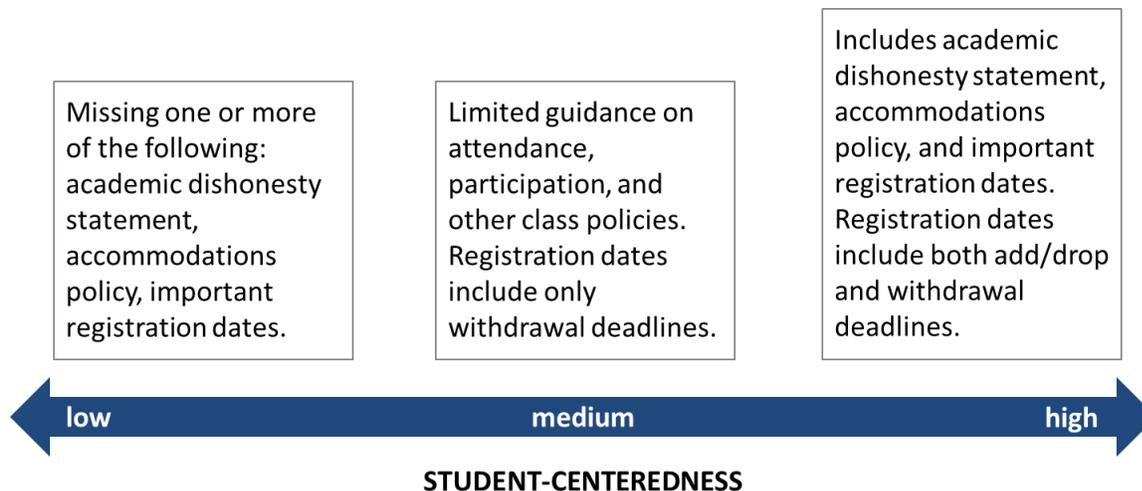
ELEMENTS: academic dishonesty, accommodations, registration policies

The “high” syllabi stand out in that they not only provide all college policies. In addition, they suggest that students speak to the instructor if a policy stands to affect them.

For example, one syllabus stated that students should see the instructor if they have a disability. This suggests that the instructor is willing to engage with the student in how best to address the disability, given the demands of the class.

In contrast, a “medium” syllabus re-iterates the official policies and directs students to the course catalog for further instructions.

FIGURE 10: COLLEGE POLICY STUDENT-CENTEREDNESS



EXAMPLES

The following examples are from practices that were ranked “medium” and “high.”

Medium

- Withdrawal from the course after the official day of record, see current catalog for date, will result in a final grade of “W” on the student transcript and no credit will be awarded. It is the student’s responsibility to initiate and complete a request for withdrawal from any course.”



High

- “If you have a disability which may require classroom or test accommodations, please see me as soon as possible so that your needs may be met.”



SUMMARY OF FINDINGS

- While many common traits appear across the syllabi, there are also many differences.
- The “Learning Objectives” and “Core Competencies” sections of the syllabi are articulated in technical terms and students may not recognize what this course will enable them to do.
- The department documents that provide excellent ideas for how to be successful are referenced within a couple of syllabi, but not all of them.
- The syllabi present a range of student-centered approaches, though largely absent are equity-minded approaches.



SUGGESTIONS FOR MATH V03 SYLLABI

1. *Course Descriptions that Connect Learning to Real-World Issues*

Consider developing course descriptions that not only describe what students can expect to learn in the course, but also connects this learning with real-world issues and applications. For example, a course description could say that logarithmic functions are foundational to understanding predictions of population growth.

2. *Connect Learning Outcomes and Core Competencies*

Consider making a more explicit connection between the learning outcomes and core competencies that are included in the syllabi.

3. *How to Be Successful Document*

Consider including with the syllabus the “How to Succeed at Math—No, You Don’t Have to Be a Genius” document or an equivalent statement.

4. *Shared Syllabus Template*

Consider creating a shared syllabus template for Math V03 that includes information that is required to be on VC course syllabi, such as basic course information and college policies on accommodations and academic dishonesty. The template can also include suggestions on syllabi organization and lay outs. From this template, instructors can customize their syllabi to suit the needs of their class.

5. *Syllabus Review Workshop*

Consider conducting a syllabus review workshop for all Math faculty, starting with V03 instructors. The workshop will allow individual faculty to self-assess their own syllabi to determine how they can be made more student-centered, culturally inclusive, and equity-minded.