ONLINE PERSONALIZED PRECALCULUS PROGRAM

Information for Academic Advisers
Summary

The Personalized Precalculus Program is a project of the Texas A&M University Department of Mathematics and funded by the National Science Foundation. The goal of the program is to increase student success in Calculus I by improving students’ prerequisite skills during the summer. Students in the program work through an online personalized study plan with the help of a live tutor. The following document gives an overview of the components of the program and appropriate student placement, particularly for students who did not achieve the minimum score (22) for placement into Calculus I. The document concludes by addressing some common questions.

Table of Contents

Program Overview p. 2

Sample Student Scenarios p. 3

Walk Through the Personalized Study Plan (PSP) p. 4

Frequently Asked Questions p. 6

For more information about the Personalized Precalculus Program contact Donald Allen, dallen@math.tamu.edu or Jennifer Whitfield, jwhitfld@math.tamu.edu.
Program Overview

The Purpose of the Personalized Precalculus Program (PPP).

The PPP is a program designed to increase the success rate in Calculus I of incoming TAMU students. During the spring semester, prospective TAMU students are required to take the Math Placement Exam (MPE), which is then used to place students in the correct math class and identify students who are at risk of performing poorly in Calculus I. The identified students are invited to participate in the PPP and spend 6 weeks during the summer strengthening their prerequisite mathematics skills within the structure of an online learning environment. Each student is also provided with a real-time, online tutor.

After completing the PPP, students may retake the MPE to improve their score and then enroll in Calculus I (Math 151, Math 171, or Math 147) with increased chances of success.

About the PPP

The PPP is delivered entirely online and uses an array of technology-mediated strategies to help students strengthen their individual mathematical weaknesses. Students who enter the program have an online Personalized Study Plan (PSP) generated for them. The PSP is housed in WebAssign, an online assessment application. When working on the PSP, each student takes chapter pretests and then is guided through exercises and assessments specifically designed to address the student’s individual mathematical needs. Each student also has regular access to a professional mathematics tutor who monitors student progress and conducts real-time tutoring sessions. To preview the PSP, please refer to the section “Walk Through the Personalized Study Plan (PSP)” in this document.

Each summer session lasts for 6 weeks and there are 8 sessions throughout the summer from which to choose.

The program costs $100. Program dates and enrollment information are available online at http://nsfstep.math.tamu.edu/

About the Math Placement Exam (MPE)

All prospective TAMU students must take the MPE, a 33-question, 90-minute exam, delivered online. No calculators are allowed. The Department of Mathematics recommends that students take the MPE no later than June 1, but students should be encouraged to take the MPE as early as possible.

For fall registration, students who do not score 22 or higher on the Math Placement Exam (MPE) will be blocked from self-enrolling in Calculus I (Math 151, Math 171, or Math 147). Students who obtain a score in the range of 14 to 21, inclusive, on the Math Placement Exam (MPE) are eligible to enroll in the PPP. Students who score 13 or less should enroll in Math 150.

Students can take the MPE a total of 3 times, but they must wait 30 days before retaking the MPE. Exceptions can be made for extenuating circumstances on a case-by-case basis. Contact your AOC Dean to execute the override.

Students’ MPE scores are visible to advisers in Compass.

The MPE is located online at https://mathassessment.tamu.edu/
Sample Student Scenarios

<table>
<thead>
<tr>
<th>MPE Score</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 to 33</td>
<td>Enroll in Math 151.</td>
</tr>
</tbody>
</table>
| 14 to 21  | The student has three choices:  
1) Enroll in the PPP and the retake the MPE at a later date to achieve a score of 22 or better. (Highly Recommended)  
2) Study independently and then retake the MPE to attempt to score 22 or higher without intervention. (Not Recommended)  
3) Enroll in Math 150. (Not Recommended) |
| 13 or less| The student has two choices:  
1) Enroll in Math 150.  
2) Study independently and then retake the MPE to attempt to score 22 or higher without intervention. |

Note: If you feel there is a student who should be “forced” into Calculus I without an MPE score of 22 or higher, contact the AOC Dean for your college. The AOC Deans have override privileges for the Calculus I restriction.

**Scenario 1**
A student arrives at her NSC advising session with a score of 19 on the MPE. She is currently enrolled in the PPP.

*Recommendation:* Register the student for Math 150. After the successful completion of the PPP, the student will retake the MPE and, if she scores a 22 or higher, she will be able to self-enroll in the appropriate Calculus I course. Department of Mathematics personnel will inform the appropriate advising office of the forthcoming schedule change for the student.

**Scenario 2**
A student arrives at his NSC advising session with a score of 21 on the MPE after taking it only once. He is not enrolled in the PPP, but took AP Calculus in high school and scored a 4 on the AP test.

*Recommendation:* Have the student retake the MPE. If he took the MPE less than 30 days prior, he may be eligible for an override of the 30-day rule. If the student then scores 22 or higher on his retake, register him for Calculus I, otherwise register him for Math 150 and encourage him to enroll in the PPP.

**Scenario 3**
A student arrives at her NSC advising session with a score of 17 on the MPE after taking it only once, and a 670 SATM. She is not enrolled in the PPP.

*Recommendation:* Have the student retake the MPE. If the student then scores 22 or higher on her retake, register her for Calculus I. Otherwise, register her for Math 150 and encourage her to enroll in the PPP.

**Scenario 4**
A student arrives at his NSC advising session with a score of 15 on the MPE after taking it only once. His SATM is 610 and he is not enrolled in the PPP.

*Recommendation:* Register the student for Math 150 and encourage him to enroll in the PPP.
Walk Through the Personalized Study Plan (PSP)

Students begin by taking a quiz to identify mathematical strengths and weaknesses. The results of the quiz determine the work that a student must do to successfully complete the PPP and PSP.

A sample PSP is shown below. In the PSP's histogram, the green bars represent areas of strength, the yellow bars represent areas of minor deficiencies, and the red bars represent areas of major deficiencies. Students work, independently, to obtain all green bars in their PSP's histogram.

To practice and improve skills in the yellow and red sections, students click on “Tutorial”. To increase mastery of each section’s content and make progress, as represented by the histogram, students click on “Practice Quiz”.

Students who need help have access to a number of resources in the online system. An example of how to access those resources is shown below.
When a student has earned all yellow or green bars for the sections of a chapter, then he or she is ready to retake the Chapter Quiz. The goal is to score higher than 80%.

When all of the Chapter Quiz sections have a yellow or, preferably, green bar, then the PSP is complete and the student may retake the Math Placement Exam.
Frequently Asked Questions

**Question:** I have a student who wants to retake the MPE before the 30-day automatic reset window? How can I do this?

**Answer:** Each College has a representative that can reset the MPE for students. Check with your college's Associate Dean to determine the MPE representative.

**Question:** I have a student who failed Math 151 in Spring 2011 and now they cannot enroll in Math 151 for Fall 2011. Who can override this Math 151 block?

**Answer:** The AOC Deans have override privileges. Contact your AOC Dean to execute the override.

**Question:** Can transfer students take the Personalized Precalculus Program?

**Answer:** Yes. Ask the transfer student to take the MPE. If the student's score is between 14 and 21, inclusive, he or she may sign up for the program.

**Question:** A student has AP credit (or dual credit) for MATH 151, but wants to take MATH 151 anyway. Does the student need to take the MPE?

**Answer:** Yes, because an MPE score of 22 or above is prerequisite for MATH 151.