



California Community Colleges

Multiple Measures Placement Service  
(MMPS) Implementation Guide

DRAFT

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# Introduction

The Multiple Measures Placement Service (MMPS) facilitates the collection of verified high school transcript data, generation of an AB-705-compliant recommended placement in English and Math, and delivers the results to colleges along with each standard CCCApply application.

In response to Assembly Bill 705, the Chancellor’s Office, in collaboration with statewide advisory committees and technical workgroups, has been implementing the policies, rulesets, data acquisition agreements, and integration pipes to deliver multiple measures placement recommendations to the colleges. This implementation guide outlines the details of this process and the implementation timelines.

## Multiple Measures Placement Service Pilot Release Schedule

The Multiple Measures Placement Service (MMPS) is scheduled for early adopter, pilot-college onboarding in Fall 2018, with system-wide adoption and implementation planned for Winter 2019.

MMPS is planned to be released in three stages:

- Pilot Release 1: December 20, 2018, with pilot colleges able to download the MMPS data and recommendations via the Placement Adapter in CSV format

Partial Example with Header Row:

PLACEMENTSTATUS	CCCID	COLLEGEMISCODE	SSID	DATASOURCE	ENGLISH	SLAM	STEM	ISALGI	ISALGII	TRIGONOMETRY	PRECALCULUS	CALCULUS	COMPLETEDLEVELTHGRADE
COMPLETE_PLACEMENT	AAB			3	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE	COMPLETEDLEVELTHGRADE
PLACEMENTSTATUS	CCCID	COLLEGEMISCODE	SSID	DATASOURCE	ENGLISH	SLAM	STEM	ISALGI	ISALGII	TRIGONOMETRY	PRECALCULUS	CALCULUS	COMPLETEDLEVELTHGRADE
COMPLETE_PLACEMENT	AAB			2	3	3	3	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE

- Pilot Release 2: Winter/Spring 2019, with pilot colleges able to both download the MMPS data and recommendations using the Placement Adapter (CSV) AND concurrently see the same data and recommendations written directly to a staging table in their SIS
- Pilot Release 3: Fall 2019, with pilot colleges able to get MMPS data as above in production as well as see any enhancements or bug fixes incorporated as determined via Pilot Testing

## How the Multiple Measures Placement Service Works

The Multiple Measures Placement Service reports placement data and placement recommendations based on a hierarchy of sources in this order, as available:

1. CCGI
2. ERP/Cal-PASS Plus
3. CA Department of Education (CDE)
4. CCCApply student self-reported data.

**Note 1:** CDE and the associated CalPADS data will not be delivered as part of the Pilot.

**Note 2:** When CCCApply self-reported data includes a higher "highest math course" than the one reported from ERP/Cal-PASS Plus, then math placement is based on a combination of the self-reported data and the verified data from CalPASS (assuming there is no CCGI data). See the datasource field details in [Appendix A](#).

## Placement Logic



1. Student applies to college via submitting a CCCApply application
2. Math and English placement recommendations are calculated using any/all available transcript data, in alignment with AB-705 statewide rulesets  
*Transcript data sources (in priority order):*
  - California College Guidance Initiative (CCGI) - CaliforniaColleges.edu
  - Cal-PASS Plus/ERP
  - California Department of Education (CDE) record
  - Self-Reported via CCCApply opt-in screens
3. Placement recommendations are delivered to the college via SuperGlue  
*Placement data delivery to the colleges will be via one of the two methods below at each college's request:*
  - A [downloadable CSV file via a Placement Adapter](#) (Fall 2018)
  - Writing directly to [staging table in the college's SIS](#) via the SuperGlue College Adaptor (Spring 2019)

## Multiple Measures Placement Service (MMPS) English Placement Details

English Placement	Placement Approach
Students will be recommended into college-level English by default.	Recommendations received from the MMPS will be based on level of support and display in the form of: <ul style="list-style-type: none"> <li>● no support</li> <li>● recommended support</li> <li>● strongly recommended support, or</li> <li>● no recommendation available because of absence of data</li> </ul>

## Multiple Measures Placement Service (MMPS) Math Placement Details

There are two different math placements: a SLAM placement and a STEM placement depending on students' educational goal.

Math Placement Type (determined via student's educational goal)	Placement Approach
<b>SLAM</b> (statistics/liberal arts mathematics)	Similar to the English placement in that students will be recommended into transfer-level math by default with MMPS recommendations of: <ul style="list-style-type: none"> <li>● no support</li> <li>● recommended support</li> <li>● strongly recommended support, or</li> <li>● no recommendation available because of absence of data</li> </ul>
<b>STEM</b> (science, technology, engineering and math)	STEM students will be processed the same way as SLAM students except that colleges will likely take into consideration completion of intermediate algebra. Transfer-level STEM recommendations: <ul style="list-style-type: none"> <li>● no support</li> <li>● recommended support</li> <li>● strongly recommended support, or</li> <li>● no recommendation available because of absence of data</li> </ul>

**Note:** See [Appendix E: MMPS Decision Logic and Placement Adjustment Guidelines](#) for additional information.

### Notes for Sharing Placement Data With Students

The MMPS provides English placement specifically whenever data is available. i.e. The MMPS will generate and provide English placements for all students for whom data is available . This does not mean that students should be provided a placement based on their background. Some students would be better served by registering in an ESL curriculum, or recommended course of action. If a student feels they would be better served by an ESL curriculum, they must have the option to do so.

For math placement, MMPS doesn't determine if a student is better served by a SLAM math track or a STEM math track. Colleges need to present math placements that allows student to select the best track based on their education goals.

For students for whom MMPS does not have data, a locally-developed, guided self-placement process must be implemented to guide them on their registration.

### Multiple Measures Placement Service Data Sent to Colleges

The table below outlines the placement data sent to colleges.

<b>Recommendations</b>	<ul style="list-style-type: none"> <li>● English support recommendation</li> <li>● SLAM support recommendation</li> <li>● BSTEM support recommendation</li> <li>● A true/false flag on successful completion of intermediate algebra (equivalent or higher)</li> <li>● A true/false flag on successful completion of algebra (equivalent or higher)</li> </ul>
<b>MMPS Data</b>	<ul style="list-style-type: none"> <li>● Source of high school data: CCGI, CalPASS, CDE, or self-reported data (<b>Note:</b> CDE data is not currently available pending MOU )</li> <li>● Highest HS Math course attempted</li> <li>● Highest HS Math grade</li> <li>● Highest HS Math course successfully completed</li> <li>● Highest HS Math course successfully completed grade</li> <li>● Highest HS English course attempted</li> <li>● Highest HS English grade</li> <li>● Highest HS English course successfully completed</li> <li>● Highest HS English course successfully completed grade</li> <li>● HS GPA</li> </ul>

**Note:** See [Appendix A: Multiple Measures Placement Service Data Dictionary](#) for additional details.

## Implementation Overview

The process for implementing the Multiple Measures Placement Service at each college requires some coordination between the CCC Tech Center Enabling Services team, the district/college admissions decision makers, and the district IT staff.

The CCC Tech Center's Enabling Services team will reach out to your college to determine how you want to receive MMPS data. At this point you can let the team member know you'd like the data downloaded to a CSV file or written directly to a staging table in your SIS.

College admissions management will need to determine if their district will opt in for self-reported data (CCCAppl) and/or validated transcript data (CCGI, Call-Pass PLUS, CA Dept. of Ed.) for the student. See the Pre-Implementation section's [Considerations table](#), below.

District IT staff may determine if the district prefers a CSV download via a Placement Adapter (Fall 2018) or a direct write of placement data to the college's SIS staging table (Winter/Spring 2019).

## Pre-Implementation

The following options are available for implementing/accessing the MMPS data and recommendations for your college:

- Placement Adapter (Fall 2018)
- Direct write to a staging table in your college's SIS (Winter/Spring 2019)

## Considerations for Placement Data Source

Colleges can opt in to one or both multiple measures data sources:

- Self-reported information on the CCCAppl application's Education tab (*High School Transcript Information* section)
  - Note:** The Pilot environment is configured for all colleges to be opted in for self-reported student information. You will need to specifically request to opt in for self-reported student information your Production environment if you choose to use that data source.
- Multiple Measures Placement Service

Use the table below to understand your college’s data options and responsibilities under the various scenarios.

If you choose to opt in to:	Then:
ONLY the self-reported option (CCCApply)	Your college is responsible for placing students in English and Math courses in a manner that ensures the students will have an EQUAL or BETTER chance of successfully completing transfer-level English and Math, and may be required to verify this
ONLY the Multiple Measures Placement Service (CCGI, Call-Pass PLUS, CA Department of Ed.)	<p>Placement data and recommendations will be based on the verified California high school transcript data from either CCGI or Cal-PASS Plus</p> <p>If no verified data is available, no placement will be provided</p> <p>Placement for out-of state students cannot be provided (i.e. your college would need to opt-in to the self-reported high school transcript option in CCCApply in order to capture an out-of-state student’s self-reported placement data)</p>
BOTH the self-reported option and the Multiple Measures Placement Service	<p>The self-reported data is fed into the MMPS</p> <p>Placement recommendations are based on verified high school transcript data first (CCGI and Cal-PASS Plus)</p> <p>If no verified high school transcript data is available in either CCGI or CalPASS-Plus, self-reported data is used for the placement</p> <p><b>Note:</b> Self-reported questions do not appear for all students (i.e. those whose last high school attended was NOT the United States); students who fall in this category will not receive a placement recommendation from MMPS.</p>
NEITHER the self-reported option OR the Multiple Measures Placement Service	Your college will need to manage your own English and Math course placement and may be

	required to prove that your placement solution is equal to or better than the statewide approach
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# Implementation Options and Details

This section provides details for implementing the placement data and recommendations.

There are two options for accessing the data:

**Option 1: (CSV Download):** A Placement Adapter that polls every 30 seconds to pull down placement data and recommendations in CSV format to your server. (Fall 2018)

**Option 2: (Writing directly to your SIS):** Using the SuperGlue College Adaptor, placement data and recommendations are written directly to your SIS. (Spring 2019)

## Option 1: Download Student Placement Data in a CSV File (Fall 2018)

These instructions outline steps to access the Multiple Measures Placement Service (MMPS) CSV file that includes placement data and placement recommendations. A more integrated process that writes placement data and recommendations directly to your SIS via the College Adaptor will also be available at a later date.

The CSV placement data access involves downloading and installing a Placement Adapter that runs on a local server/VM. The Placement Adapter will download the assessment data (self-reported as well as CCGI high school transcript data, if available) as well as the placement recommendation. (Recommendation definitions are outlined in the *MMPS Implementation Guide*).

**Note:** Each Custom SIS college must develop their own process for pulling the placement data from the downloaded CSV file into their SIS. See [Sample Banner/Multiple Measures Placement Data](#) for an example of a placement object.

## Installation Steps

This section includes installation steps for both:

- [Linux](#) (recommended), and,
- [Windows](#) servers.

## Linux Hosts (Recommended - Includes SuperGlue infrastructure):

Installing the Placement Adapter on a Linux host allows integration with the SuperGlue infrastructure, with attendant benefits including automated uptime monitoring and hands-off software updates. If your college is already running the College Adaptor, no college-side installation actions are needed - the placement adapter will be installed on an on-demand basis. If your college is using a Linux host to run the CCCApply Download client, you may use that host. Otherwise, create a new Linux VM (Ubuntu 16.04 or 18.04 allowed) for this purpose. See [Linux Host Setup Instructions](#).

### Required Software:

Docker 17.06 - Reference [Linux Host Setup Instructions](#)

1. Obtain the script that will be used to register your host with the SuperGlue infrastructure, and facilitate the install of the Placement Adapter. This script will be delivered through a secure note provided to you by CCCTC staff. Store this script securely, as it contains credentials.
2. On the Linux server/VM, run the provided script in a terminal window. Provide your college's miscode at the prompt.

```
./register-host.sh
```

This performs the following actions:

- a. Registers the host with the SuperGlue infrastructure.
- b. The placement adapter can now be installed in a managed fashion. This will be facilitated by the CCCTC staff.

## Linux Host Setup

Linux VM Creation:

Linux Reference:

<https://docs.google.com/document/d/1FMbjgBU473erTiveBCEbD4uixXB-9b46ULccb9IkSMw/edit>

**OR:** If installing Docker manually on an existing Linux Ubuntu VM instead:

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -  
add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu  
xenial stable"  
apt-get update  
apt-get install -y docker-ce=17.06.0~ce-0~ubuntu  
apt-mark hold docker-ce=17.06.0~ce-0~ubuntu  
usermod -aG docker <admin_user> (optional)
```

Network Firewall Requirements (Performed by Network Administrator):

- Firewall outbound to Port TCP 443 to all IP addresses is recommended.  
Port: 443; Protocol TCP

- Firewall outbound to <https://registry.ccctechcenter.org:5000> - (enables pulling of Docker images)  
IP: 52.42.216.115 Port 5000; Protocol: TCP
- College Host inbound from Rancher Servers IPs 52.25.62.20/52.38.206.15 - (enables Rancher server to communicate with Rancher Agent)  
IPs: 34.211.214.103/54.68.159.190; Ports: 500, 4500; Protocol: UDP

## Windows Hosts (Non-integrated Placement Adapter only; does not include SuperGlue Infrastructure)

This process will install a windows service named “PlacementAdapter” on the host.

1. On the server/VM where you run your current CCCApply Download Client, open a browser and input the signed url for download to your local server/VM:
  - a. The latest version (1.0.1) is available at: [https://ccc-dl-pkgs.s3.amazonaws.com/placement-adapter/PlacementAdapterSvc\\_latest.zip](https://ccc-dl-pkgs.s3.amazonaws.com/placement-adapter/PlacementAdapterSvc_latest.zip)  
**Note:** If your college participated in early-pilot testing, your Placement Adapter windows service would write CSV files that didn't have a HEADER row. To upgrade, process/move/rename any existing CSV file for the Placement Adapter. The HEADER row is written when the file is created upon the next Placement Adapter poll.
2. Right-click on the zip file and choose “Extract All”.
3. Navigate to the extraction target directory, and double-click on the file “install.bat”. Follow the prompts to input:
  - a. Your mis code
  - b. The environment (pilot or prod)
  - c. The target directory + file to save the csv file at
  - d. The client secret (This will be provided in a secure note by CCCTC staff to only those colleges on Windows hosts. The client secret is obtained from <https://auth.pilot.ccctechcenter.org> and then encrypted following the directions [here.](#))
4. Open the logs/stdout file, and confirm it contains a line similar to: “Getting placement data from: <https://service-router.ccctechcenter.org/student-placements/>” at the end.

The Placement Adapter will poll for, and download, the placement data and recommendations to the provided local CSV file on your server/VM. As new placements are obtained they append to this file, one row per placement. As your college processes those placements they may be removed from the file.

**Note:** Processing of downloaded placement data is not covered by this workflow and must be implemented in conjunction with your local IT staff.



## Option 2: Student Placement Data Written to Your SIS (Spring 2019)

For colleges that have integrated with the College Adaptor, you can elect to have the placement data and recommendations written directly to a staging table in your SIS. For information on specific SIS mapping suggestions, refer to the following sections later in this document:

[Banner SIS: Placement Data Map Sample Template](#)

[Colleague SIS: Placement Data Map Sample Template](#)

[PeopleSoft SIS: Placement Data Map Sample Template](#)

### Steps to Implement MMPS Data Writing Directly to Your SIS

Follow the steps below to start MMPS data writing directly to a staging table in your SIS.

1. The Enabling Services team will reach out to your college to determine how you want to receive MMPS data. At this point you can let the team member know you'd like the data written directly to a staging table in your SIS.
2. Enabling Services provide your college an SQL script to create the staging table in your SIS.
3. The Enabling Services team then updates your college adaptor to v2.4+ and:
  - a. Establishes a whitelist entry for your college, allowing the data to begin delivery.
  - b. The SuperGlue development team edits a workflow-properties-`<env>`.yml file (where `<env>` is either dev, pilot, prod, or qa) which "turns on" the writing of MMPS data for your specific college and environment.
4. Once you receive MMPS data in your SIS's staging table, you can ingest that data into your school's system on your own schedule.

## Post-Implementation Support

After your college has implemented either the Placement Adaptor or the SuperGlue College Adaptor for MMPS data, and your college has opted in for the Multiple Measures Placement Service options, there are several options for post-implementation support.

- A [Get Satisfaction](#) channel for Multiple Measures is accessible from the Help section within the platform. This channel provides access to a knowledge base and frequently asked questions.
- CCCTC Help Desk directly:
  - Phone: 877-247-4836
  - Email: [support@openccc.net](mailto:support@openccc.net)
- Create a Staff Helpdesk Ticket:
  - Email: [staffsupportccctc@openccc.zendesk.com](mailto:staffsupportccctc@openccc.zendesk.com)

# Appendix A: Multiple Measures Placement Service Data Dictionary

Placement Data transmits ERP AB705 placement information and reduced transcript information and associates the cccid and college miscode to be sent to colleges for use in their student placements.

Documentation on data coming from ERP:

<https://ab705.calpassplus.org/docs/index.html> (see Placement and Transcript Models)

CCCApply Data Dictionary:

[CCCApply Data Dictionary](#)

The following are the underlying data element definitions that make up the Multiple Measures Placement Service object model.

Field	Type	Length	Constraints	Meaning	Sensitivity
placementStatus	character varying	20	Not null	Used to quickly differentiate between the status of the placement:  Allowed values:  COMPLETE_PLACEMENT,  PARTIAL_PLACEMENT (only grade point average available so unable to give high level math placements and transcript data will be incomplete or unavailable)  NO_PLACEMENT (student was not found in erp database)	Low
cccid	Character varying	20	not null	cccid of student completing CCCApply application	Medium
ssid	Character varying	10	maybe null	ssid of student completing CCCApply application	High
collegeMISCode	Character varying	20	not null	College miscode of college student completed application.	Low

datasource	integer(\$int 32)		not null, values 1-4	Source Of Placement Data (in priority order): 1 = California College Guidance Initiative (CCGI) 2 = Cal-PASS Plus (CPP): No CCCApply self-reported data was available 3 = CCC Apply: No Cal-PASS Plus data was available) 4 = Both CCCApply AND CalPASS+ data were available (i.e. represents a commingling of data from CalPASS+ and CCCApply self-reported data). If the CCCApply data has a higher "highest math course" than that in CalPASS+, it will help to generate a higher placement. If the CCCApply data has a lower "highest math course" than that in CalPASS+, the "4" data source indicates that data from both sources was considered.	Low
english	integer(\$int 32)		not null, maximum: 3 minimum: 1	English Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended	Low
slam	integer(\$int 32)		maybe null maximum: 3 minimum: 1	SLAM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended	Low
stem	integer		maybe null maximum: 3 minimum: 1	STEM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended	Low
isAlgI	boolean		maybe null	Successfully Completed Algebra I	Low
isAlgII	boolean		maybe null	Successfully Completed Algebra II	Low
trigonometry	boolean		maybe null	Trigonometry Recommendation True = Recommended False = Not Recommended	Low

preCalculus	boolean		maybe null	PreCalculus Recommendation True = Recommended False = Not Recommended	
calculus	boolean		maybe null	Calculus Recommendation True = Recommended False = Not Recommended	
completedEleventhGrade	boolean		maybe null	Completed Eleventh Grade	Low
cumulativeGradePointAverage	number(\$double)		maybe null, pattern: ^[0-3]\.\d{2}\$ ^4.00\$	Cumulative Grade Point Average	Low
englishCompletedCourseId	integer		maybe null  1 = 12th grade Advanced Placement (AP) English Composition or Literature  2 = 12th grade Honors English Composition or Literature  3 = 12th grade English Composition or Literature  4 = 11th grade Advanced Placement (AP) English Composition or Literature  5 = 11th grade Honors English Composition or Literature  6 = 11th grade English	Highest English Course Completed	Low

			<p>Composition or Literature</p> <p>7 = 10th grade (or lower) English Composition or Literature</p> <p>0 = None of the Above / Don't Know</p>		
englishCompletedCourseGrade	string		<p>maybe null</p> <p>A A- B+ B B- C+ C C- D F P NP ON = Other Non-passing Grade X = None of the Above / Don't Know</p>	Grade of Highest English Course Completed	Low

<p>mathematicsCompletedCourseId</p>	<p>integer(\$int 32)</p>		<p>maybe null</p> <p>1 <input type="checkbox"/> Pre- algebra or lower</p> <p>2 <input type="checkbox"/> Algebra 1</p> <p>3 <input type="checkbox"/> Integrated Math 1</p> <p>4 <input type="checkbox"/> Integrated Math 2</p> <p>5 <input type="checkbox"/> Geometry</p> <p>6 <input type="checkbox"/> Algebra 2</p> <p>7 <input type="checkbox"/> Integrated Math 3</p> <p>8 <input type="checkbox"/> Statistics</p> <p>9 <input type="checkbox"/> Integrated Math 4</p> <p>10 <input type="checkbox"/> Trigonometry</p> <p>13 - Math Analysis</p> <p>11 <input type="checkbox"/> Pre- calculus</p> <p>12 <input type="checkbox"/> Calculus or higher</p> <p>0 - None of the Above / Don't Know</p>	<p>Highest Mathematics Course Completed</p>	<p>Low</p>
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<p>mathematicsCompletedCourseGrade</p>	<p>string</p>		<p>maybe null</p> <p>A</p> <p>A-</p> <p>B+</p> <p>B</p> <p>B-</p> <p>C+</p> <p>C</p> <p>C-</p> <p>D</p> <p>F</p> <p>P</p> <p>NP</p> <p>ON = Other Non-passing Grade</p> <p>X = None of the Above / Don't Know</p>	<p>Grade of Highest Mathematics Course Completed</p>	<p>Low</p>
<p>mathematicsPassedCourseId</p>	<p>integer(\$int32)</p>		<p>maybe null</p> <p>1 <input type="checkbox"/> Pre-algebra or lower</p> <p>2 <input type="checkbox"/> Algebra 1</p> <p>3 <input type="checkbox"/> Integrated Math 1</p> <p>4 <input type="checkbox"/> Integrated Math 2</p> <p>5 <input type="checkbox"/> Geometry</p> <p>6 <input type="checkbox"/> Algebra 2</p> <p>7 <input type="checkbox"/> Integrated Math 3</p> <p>8 <input type="checkbox"/> Statistics</p>	<p>Highest Mathematics Passed</p>	<p>Low</p>

			<p>9 <input type="checkbox"/> Integrated Math 4</p> <p>10 <input type="checkbox"/> Trigonometry</p> <p>13 – Math Analysis</p> <p>11 <input type="checkbox"/> Pre-calculus</p> <p>12 <input type="checkbox"/> Calculus or higher</p> <p>0 - None of the Above / Don't Know</p>		
mathematicsPassedCourseGrade	string		<p>maybe null</p> <p>A</p> <p>A-</p> <p>B+</p> <p>B</p> <p>B-</p> <p>C+</p> <p>C</p> <p>C-</p> <p>D</p> <p>F</p> <p>P</p> <p>NP</p> <p>ON = Other Non-passing Grade</p> <p>X = None of the Above / Don't Know</p>	Grade of Highest Mathematics Course Passed	Low

tstmpERPTransmit	Long		Unix Timestamp	Time stamp when placement was received from ERP timestamp	Low
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## Appendix B: Sample Banner Multiple Measures Placement Service Data Mapping

The following tables provide a sample template for mapping the multiple measures placement service data to Banner SIS.

CCC Field Name	Banner DB Staging Table	Banner Field Name	Explanation
	SZRPLMT	SZRPLMT_SEQ_NO	An auto assigned incremental sequence
	SZRPLMT	SZRPLMT_PIDM	A foreign key for the student (e.g. from)
cccid	SZRPLMT	SZRPLMT_CCCID	cccid of student completing CCCApply application
ssid	SZRPLMT	SZRPLMT_STATEWIDE_STUDENT_ID	ssid of student completing CCCApply application
collegeMISCode	SZRPLMT	SZRPLMT_MIS_CODE	College miscode of college student completed application.
dataSource	SZRPLMT	SZRPLMT_DATA_SOURCE	Source Of Placement Data 1 = California College Guidance Initiative (CCGI) 2 = Cal-PASS Plus (CPP) 3 = CCC Apply
english	SZRPLMT	SZRPLMT_ENGLISH	English Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly

			Recommended
slam	SZRPLMT	SZRPLMT_SLAM_SUPPORT	SLAM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
stem	SZRPLMT	SZRPLMT_STEM_SUPPORT	STEM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
isAlgI	SZRPLMT	SZRPLMT_IS_ALG_I	Successfully Completed Algebra I
isAlgII	SZRPLMT	SZRPLMT_IS_ALG_II	Successfully Completed Algebra II
trigonometry	SZRPLMT	SZRPLMT_TRIGONOMETRY	Trigonometry Recommendation True = Recommended False = Not Recommended
preCalculus	SZRPLMT	SZRPLMT_PRE_CALCULUS	PreCalculus Recommendation True = Recommended False = Not Recommended
calculus	SZRPLMT	SZRPLMT_CALCULUS	Calculus Recommendation True = Recommended False = Not Recommended
completedEleventhGrade	SZRPLMT	SZRPLMT_COMPLETED_11TH_GRADE	Completed Eleventh Grade
cumulativeGradePointAverage	SZRPLMT	SZRPLMT_CUMULATIVE_GPA	Cumulative Grade Point Average
englishCompletedCourseId	SZRPLMT	SZRPLMT_ENG_COMP_COURSE_ID	Highest English Course Completed

englishCompletedCourseGrade	SZRPLMT	SZRPLMT_ENG_COMP_COURSE_GRADE	Grade of Highest English Course Completed
mathematicsCompletedCourseId	SZRPLMT	SZRPLMT_MATH_COMP_COURSE_ID	Highest Mathematics Course Completed
mathematicsCompletedCourseGrade	SZRPLMT	SZRPLMT_MATH_COMP_COURSE_GRADE	Grade of Highest Mathematics Course Completed
mathematicsPassedCourseId	SZRPLMT	SZRPLMT_MATH_PASS_COURSE_ID	Highest Mathematics Passed
mathematicsPassedCourseGrade	SZRPLMT	SZRPLMT_MATH_PASS_COURSE_GRADE	Grade of Highest Mathematics Course Passed
	SZRPLMT	SZRPLMT_ACTIVITY_DATE	The date the row is inserted
	SZRPLMT	SZRPLMT_USER_ID	The ID (the College Adaptor)
	SZRPLMT	SZRPLMT_VPDI_CODE	Unused, but reserved for multi-tenant Banner installations
placementStatus	SZRPLMT	SZRPLMT_VPDI_STATUS	

## Appendix C: Sample Colleague Multiple Measures Placement Service Data Mapping

The following table provides a sample template for mapping the multiple measures placement service data to Colleague SIS.

CCC Field Name	Colleague DB Staging Table	Colleague Field Name	Explanation
	XCTC_PLMT_PLACEMENT	XCTC_PLMT_PLACEMENT_ID	
tstmpSISTransmit	XCTC_PLMT_PLACEMENT	XCTC_PLMT_ACTIVITY_DATE XCTC_PLMT_ACTIVITY_TIME	Date and time placement was added to the SIS
tstmpERPTransmit	XCTC_PLMT_PLACEMENT	XCTC_PLMT_ERP_DATE XCTC_PLMT_ERP_TIME	Date and time placement was approved by ERP
cccid	XCTC_PLMT_PLACEMENT	XCTC_PLMT_CCCID	cccid of student completing CCCApply application
ssid	XCTC_PLMT_PLACEMENT	XCTC_PLMT_SSID	ssid of student completing CCCApply application
collegeMISCode	XCTC_PLMT_PLACEMENT	XCTC_PLMT_MIS_CODE	College miscode of college student completed application.
dataSource	XCTC_PLMT_PLACEMENT	XCTC_PLMT_DATA_SOURCE	Source Of Placement Data 1 = California College Guidance Initiative (CCGI) 2 = Cal-PASS Plus (CPP) 3 = CCC Apply
english	XCTC_PLMT_PLACEMENT	XCTC_PLMT_ENGLISH	English Support Recommendation

			1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
slam	XCTC_PLMT_PLACEMENT	XCTC_PLMT_SLAM_SUPPORT	SLAM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
stem	XCTC_PLMT_PLACEMENT	XCTC_PLMT_STEM_SUPPORT	STEM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
isAlgI	XCTC_PLMT_PLACEMENT	XCTC_PLMT_IS_ALG_I	Successfully Completed Algebra I
isAlgII	XCTC_PLMT_PLACEMENT	XCTC_PLMT_IS_ALG_II	Successfully Completed Algebra II
trigonometry	XCTC_PLMT_PLACEMENT	XCTC_PLMT_TRIGONOMETRY	Trigonometry Recommendation True = Recommended False = Not Recommended
preCalculus	XCTC_PLMT_PLACEMENT	XCTC_PLMT_PRE_CALCULUS	PreCalculus Recommendation True = Recommended False = Not Recommended
calculus	XCTC_PLMT_PLACEMENT	XCTC_PLMT_CALCULUS	Calculus Recommendation True = Recommended False = Not Recommended
completedEleventhGrade	XCTC_PLMT_PLACEMENT	XCTC_PLMT_COMPLETED_11TH_GRD	Completed Eleventh Grade
cumulativeGradePointAverage	XCTC_PLMT_PLACEMENT	XCTC_PLMT_CUMULATIVE_GPA	Cumulative Grade Point Average

englishCompletedCourseId	XCTC_PLMT_PLACEMENT	XCTC_PLMT_ENG_COMP_CRSID	Highest English Course Completed
englishCompletedCourseGrade	XCTC_PLMT_PLACEMENT	XCTC_PLMT_ENG_COMP_CRSGRD	Grade of Highest English Course Completed
mathematicsCompletedCourseId	XCTC_PLMT_PLACEMENT	MATH_COMP_CRSID	Highest Mathematics Course Completed
mathematicsCompletedCourseGrade	XCTC_PLMT_PLACEMENT	XCTC_PLMT_MATH_COMP_CRSGRD	Grade of Highest Mathematics Course Completed
mathematicsPassedCourseId	XCTC_PLMT_PLACEMENT	XCTC_PLMT_MATH_PASS_CRSID	Highest Mathematics Passed
mathematicsPassedCourseGrade	XCTC_PLMT_PLACEMENT	XCTC_PLMT_MATH_PASS_CRSGRD	Grade of Highest Mathematics Course Passed
placementStatus	XCTC_PLMT_PLACEMENT	XCTC_PLMT_PLACEMENT_STATUS	Status of Placement

## Appendix D: Sample PeopleSoft Multiple Measures Placement Service Data Mapping

The following table provides a sample template for mapping the multiple measures placement service data to PeopleSoft SIS.

CCC Field Name	PeopleSoft DB Staging Table	PeopleSoft Field Name	Explanation
cccid	CCTC_PLCMT_STG	CCTC_CCCID	cccid of student completing CCCApply application
ssid	CCTC_PLCMT_STG	CCTC_SSID	ssid of student completing CCCApply application
collegeMISCode	CCTC_PLCMT_STG	CCTC_MIS_CD	College miscode of college student completed application.
	CCTC_PLCMT_STG	CCTC_PLCMT_SEQ_NBR	Auto-incremented sequence number to support multiple placement recommendations for a given applicant to a given college
dataSource	CCTC_PLCMT_STG	CCTC_PLCMT_DS	Source Of Placement Data 1 = California College Guidance Initiative (CCGI) 2 = Cal-PASS Plus (CPP) 3 = CCC Apply
english	CCTC_PLCMT_STG	CCTC_PLCMT_ENG_SR	English Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended

slam	CCTC_PLCMT_STG	CCTC_PLCMT_SLAM_SR	SLAM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
stem	CCTC_PLCMT_STG	CCTC_PLCMT_STEM_SR	STEM Support Recommendation 1 = Support Not Recommended 2 = Support Recommended 3 = Support Strongly Recommended
isAlgI	CCTC_PLCMT_STG	CCTC_PLCMT_ALG1	Successfully Completed Algebra I
isAlgII	CCTC_PLCMT_STG	CCTC_PLCMT_ALG2	Successfully Completed Algebra II
trigonometry	CCTC_PLCMT_STG	CCTC_PLCMT_TRIG	Trigonometry Recommendation True = Recommended False = Not Recommended
preCalculus	CCTC_PLCMT_STG	CCTC_PLCMT_PREC	PreCalculus Recommendation True = Recommended False = Not Recommended
calculus	CCTC_PLCMT_STG	CCTC_PLCMT_CALC	Calculus Recommendation True = Recommended False = Not Recommended
completedEleventhGrade	CCTC_PLCMT_STG	CCTC_PLCMT_11G	Completed Eleventh Grade
cumulativeGradePointAverage	CCTC_PLCMT_STG	CCTC_PLCMT_HS_GPA	Cumulative Grade Point Average
englishCompletedCourseId	CCTC_PLCMT_STG	CCTC_PLCMT_ENG_HCC	Highest English Course Completed

englishCompletedCourseGrade	CCTC_PLCMT_STG	CCTC_PLCMT_ENG_GRD	Grade of Highest English Course Completed
mathematicsCompletedCourseId	CCTC_PLCMT_STG	CCTC_PLCMT_MTH_HCC	Highest Mathematics Course Completed
mathematicsCompletedCourseGrade	CCTC_PLCMT_STG	CCTC_PLCMT_MTHCGRD	Grade of Highest Mathematics Course Completed
mathematicsPassedCourseId	CCTC_PLCMT_STG	CCTC_PLCMT_MTH_HCP	Highest Mathematics Passed
mathematicsPassedCourseGrade	CCTC_PLCMT_STG	CCTC_PLCMT_MTHPGRD	Grade of Highest Mathematics Course Passed
	CCTC_PLCMT_STG	STATUS_FLAG	A blank value whenever a new row is created. May be optionally used by the college to track processing
	CCTC_PLCMT_STG	DESCRLONG_NOTES	A blank value whenever a new row is created. May be optionally used by the college to track processing
	CCTC_PLCMT_STG	STATUS_DT	Used for tracking/auditing; defaults to the current date/time when a row is created, but updates only when the STATUS_FLAG field is changed
	CCTC_PLCMT_STG	LASTUPDOPRID	The default value is "CCTC" when a row is created, but this value should be updated to whichever operatorID the college's IT department changes it to, if desired
	CCTC_PLCMT_STG	LASTUPDDTTM	Last updated date/time
		PS_CCTC_PLCMT_STG.CCTC_PLCMT_GEN_TS	holds the tstmpERPTransmit field

		PS_CCTC_PLCMT_STG.CCTC_PLCMT_RC V_TS	holds the tstmpSISTransmit field
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# Appendix E: MMPS Decision Logic and Placement Adjustment Guidelines

The Multiple Measures Placement Service (MMPS) supports AB-705 statewide rulesets by providing colleges any self-reported student data used in placement recommendations as well as the placement recommendations themselves. The first deliverable will be in CSV format, via a Placement Adapter, and a later deliverable will write this data directly to a staging table in the college’s SIS.

This section provides:

- [Decision logic](#) that outlines AB 705 placement/recommended support, and
- [Guidelines for adjusting placement](#)/recommended support based on any information provided by the student (outside of the self-reported questions in CCCApply)

## AB-705 Placement/Recommended Support Decision Logic

MMPS coordinates several sources of data that may be used in determining student placement recommendations. In priority order, they are:

- California College Guidance Initiative (CCGI) - CaliforniaColleges.edu
- Cal-PASS Plus
- California Department of Education (CDE) record
- Self-Reported via CCCApply opt-in screens

The table below outlines the placement logic:

High School GPA and Performance	AB-705-Compliant Placement
<b>Transfer-Level English Composition</b>	
HSGPA $\geq$ 2.6	No additional academic or corequisite support required
HSGPA 1.9 - 2.6	Additional academic and corequisite support recommended
HSGPA $<$ 1.9	Additional academic and corequisite support strongly recommended
<b>Transfer-Level Statistics</b>	

HSGPA $\geq$ 3.0 <b>-OR-</b> HSGPA $\geq$ 2.3 & C or Better in Precalculus	No additional academic or corequisite support required
HSGPA 2.3–3.0	Additional academic and corequisite support recommended
HSGPA $<$ 2.3	Additional academic and corequisite support strongly recommended
<b>Transfer-Level Gateway-STEM Math</b>	
HSGPA $\geq$ 3.4 <b>-OR-</b> HSGPA $\geq$ 2.6 AND enrolled in a HS Calculus course	No additional academic or corequisite support required
HSGPA $\geq$ 2.6 or Enrolled in HS Precalculus	Additional academic and corequisite support recommended
HSGPA $\leq$ 2.6 and no Precalculus	Additional academic and corequisite support strongly recommended

**Placement and Recommended Support Can be Determined Solely from a Student’s GPA**

The student placement/recommended support can be determined solely from GPA.

However, math placements based solely on GPA have the following implied :

- Colleges will receive a math placement based on the GPA without knowing if the student completed Algebra I and Algebra II
- Colleges may need to use the supporting documentation below in order to adjust placements/recommended support based on additional information collected from the student

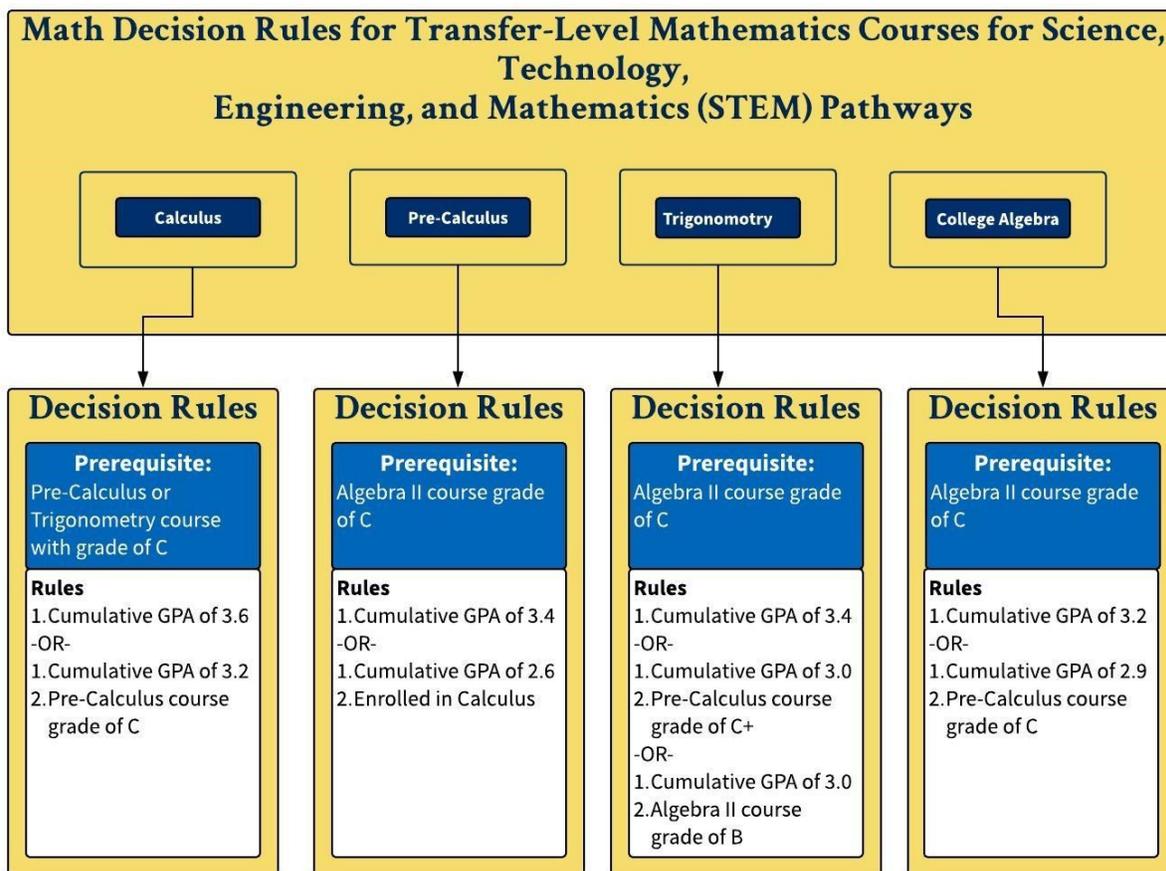
**Higher-Level Math Placement Details**

Higher-level math placements use the Direct Matriculant Model from ERP (Educational Results Partnership).

The Direct Matriculant Models (11th grade) use the following measures as predictors of successful completion of courses in each discipline at the community College:

- Cumulative high school grade point average (GPA) as of the completion of 11th grade, and,
- High school course enrollments and grades up to 11th grade

This model is intended to be used with most students who are transitioning directly to college from high school, as they will be assessing, matriculating, and even enrolling before the results from their 12th grade courses are available.



**Notes:**

- For data originating from CCGI, "InProgress" coursework will be considered for the Completed variables.
- If a condition requires success or enrollment in a specific course, enrollment in the next course in the sequence assumes the student has passed the course threshold in question. For example, a student enrolled in Calculus is assumed to have successfully passed Pre-Calculus.

Source: "Mathematics Placement Models for the Multiple Measures Assessment Project – Phase II," Revised November 2016. (MMA Research Team: [www.rpgroup.org](http://www.rpgroup.org), [www.edresults.org](http://www.edresults.org).)

