

# SAP Item #3: Maximum Attempted Units with Developmental Credits over 45 (Bug Fix)

## User Acceptance Testing (UAT) for Maximum Attempted Units (MAXT)

### UAT Kick-Off Session

**Session Date/Time:** Wednesday, April 12, 2023, 9:00 am to 10:00 am

**WebEx UAT Session Recording:** <https://sbctc.webex.com/webappng/sites/sbctc/recording/9ea6b832bb79103b8fff00505681df53/playback>

**Slide Deck:**



SAP Item 3 - UAT - MAXT Over 45 Oracle Bug.pptx

### Key UAT Dates

**UAT Testing Period:** Wednesday, April 12, 2023 at 10:00 am through Tuesday, April 18, 2023 at 5:00 pm

**UAT Sign-Off:** Due April 18, 2023, end of day

**UAT Sign-Off Survey:** <https://www.surveymonkey.com/r/YT23YDH> - Please ensure only one response is submitted per college that participated in testing.

**Target Implementation:** April 27, 2023

### Testing Environment

**Link to PQA Environment:** <https://pt-pqa.peoplesoft-nonprod-aws.ctclink.sbctc.edu/ptpqa/signon.html>

**Last Refresh Date:** 12/5/2022

**Username:** Your EMPLID

## Questions? Trouble Logging In?

Send an email to Amanda Hoover at [ahover@sbctc.edu](mailto:ahover@sbctc.edu) and CC Ana Ybarra at [aybarra@sbctc.edu](mailto:aybarra@sbctc.edu).

## Need to Report an Issue?

Submit a ticket to the Service Desk and provide as many details as possible, including screenshots, IDs used, and steps taken to produce the issue or error.

**Link to ticketing system:** <https://servicedesk.sbctc.edu/>

**Request Type:** ctcLink Support > Testing

**Subject:** UAT – FA SAP MAXT – [description of issue]


## SAP Process Overview

Eight tests are used to determine a Satisfactory Academic Status (SAP) status. Depending on the tests a college has activated, one or more tests will be executed when the SAP Process is run for an individual student or batch of students. The possible tests are:

- Academic Standing
- **Maximum Attempted Units\***
- Maximum Attempted Terms
- Minimum Current GPA
- Minimum Cumulative GPA
- Current Earned Units
- Cumulative Earned Units
- Two Year GPA

\*For the purposes of the User Acceptance Testing of the fix for the Oracle bug associated with the Maximum Attempted Units test, colleges are not being asked to test all 8 of the SAP tests.

**The focus of this testing activity is isolated to the Maximum Attempted Units test.**

 It is recognized that other areas in the SAP program are reported as having issues and are being handled separately through the various enhancements being addressed through the larger FA SAP Maintenance Item list from FAST.

# Maximum Attempted Units Test Functionality

## Maximum Attempted Units Test Configuration

- References the Maximum Attempted Units Test configurations in SAP Define Set Up and calculates based on the configurations on the Course Exclusions page.
- Calculates the total Attempted Units and assigns a SAP Status for the Test based on unit ranges defined in the configuration.

**Navigation:** Navigator > NavBar > Set Up SACR > Product Related > Financial Aid > Satisfactory Academic Progress > Define Set Up Criteria >> Criteria 1 tab

**SAP Setup**

Effective Date: 04/03/2023

**Maximum Attempted Units Test**

☒ Use Max Attempted Units Test

**Max Attempted Units Option**

☒ Towards GPA ☒ No GPA ☒ Course Credit ☒ Test Credit ☒ Other Credit ☒ TC Units Adjust

**Max Attempted Units Rules**

Academic Program	Academic Plan	Attempted MAX Units From	Attempted MAX Units To	SAP Status
ACADM	BUCBUA	112.001	135.000	MAXW
ACADM	BUCBUA	135.001	999.999	MAXT
ACADM	CHEBCA	118.001	142.500	MAXW
ACADM	CHEBCA	142.501	999.999	MAXT
ACADM	EECECA	118.001	142.500	MAXW

## Course Exclusions Configuration

- College-specific list of all courses that should be excluded from the total Maximum Attempted Units value and designate them as "Remedial" or "ESL" Course Types
- Option to define a maximum number of units that can be excluded for "Remedial" and/or "ESL" Course Types
- This configuration is only utilized by the Maximum Attempted Units Test

**Navigation:** Navigator > NavBar > Set Up SACR > Product Related > Financial Aid > Satisfactory Academic Progress > Define Set Up Criteria >> Exclusions tab

**Course Exclusions**

Setup Criteria1 Criteria2 Exclusions Communications and Checklists

Academic Institution WA College  
Academic Career UGRD Undergraduate

**SAP Setup** Find View All First 1 of 24 Last

Effective Date 04/03/2023

**Course Exclusions**

☒ Use Course Exclusions

**Max Units to Exclude**

Max ESL Units to Exclude  
Max Remedial Units to Exclude 45.00

**Course Exclusions** Personalize Find View 100 First 1-5 of 829 Last

*Course ID	*Offer Nbr			*Course Type
025005	1	AG	75	Remedial
025006	1	AG	80	Remedial
025037	1	ANTH&	20	Remedial
025066	1	AUTO	13	Remedial
025082	1	BIOL	37	Remedial

Export list of Course Exclusions to a spreadsheet

List of Courses to be excluded from the total Attempted Units value and categorized by Course Type

Course Type options:  
- ESL  
- Remedial

Activates the use of Course Exclusions in the Maximum Attempted Units Test only

Option to set a maximum number of units that can be excluded from the total Attempted Units value, based on Course Type in the configuration below


💡 Colleges should maintain the Course Exclusions list as Remedial and/or ESL courses are added at the college. You can export the Course Exclusions list to a spreadsheet and compare against a list provided by your college's Registrar to identify any courses that may need to be added.

## Attempted Units Value Calculation Logic

The Maximum Attempted Units Test is designed to perform the following steps:

1. Check if FA SAP Setup is set to **Active** for the **Maximum Attempted Units Test**. If checked, then proceed; if not, then skip.
2. Sum all **Units Taken** in the **Student Enrollment** table.
3. Determine **Units to Exclude** using **Course Exclusions** logic:
  - a. Sum Remedial and ESL units.
    - i. Sum the Units Taken from the Student Enrollment table, where the **Course ID** exists in the SAP Setup configuration for **Course Exclusions** with a **Course Type** of Remedial.
    - ii. Sum the Units Taken from the Student Enrollment table, where the **Course ID** exists in the SAP Setup configuration for **Course Exclusions** with a **Course Type** of ESL.
  - b. Compare sum of Remedial and ESL units to their corresponding Max Units to Exclude values to determine how many units to exclude from the total Attempted Units value.

- i. If the **total Remedial units** is greater than the **Max Remedial Units to Exclude** value, then replace the units to exclude with the maximum value configured.
  - ii. If the **total ESL units** is greater than the **Max ESL Units to Exclude** value, then replace the units to exclude with the maximum value configured.
  - iii. If the **Max Units to Exclude** value is left blank, then assume its value is 999.99 (because the program requires an actual number to function). Since no student will ever have more than 999.99 units in either of the Course Types, this will result in any courses with this Course Type being excluded from the total Attempted Units amount.
4. Check if FA SAP Setup, Maximum Attempted Transfer Unit Criteria is set to 'Active' for Course Credit. If checked, then proceed; if not, then skip.
5. Determine **Units to Exclude** using **Transfer Unit** options:
  - a. Read the **Cumulative Statistics** from **Term History**.
  - b. If no Transfer Unit options are selected, then the Maximum Attempted Units test only includes units attempted from the student's Enrollment. (*NOT recommended for ctcLink colleges*).
  - c. (Recommended) If all of the Transfer Units options are checked, the program will add their unit values from the Student Career Term (Term History) > Cumulative Statistics page to the sum all Transfer Units Taken.
    - i. When the **Course Credit checkbox** is checked, the program will add converted legacy credits to the All Units Taken (attempted) value.
    - ii. When the **Test Credit checkbox** is checked, the program will add converted legacy credits to the All Units Taken (attempted) value.
    - iii. When the **Other Credit checkbox** is checked, the program will add converted legacy credits to the All Units Taken (attempted) value.
6. Subtract the sum of Excluded Course Units (both Remedial and ESL) determined in Step 3 from the sum of all Units Taken in the Student Enrollment table to establish the **Final Sum Attempted Unit Value**.
7. (Now that the bug is fixed) Reads the value in the Max Remedial Units to Exclude field and exclude only up to the maximum units from the All Units Taken (attempted) value.
8. Store the All Units Taken (attempted) value as the Maximum Attempted Units on the Maintain Student SAP Data page.

 The SAP program will continue to ignore Remedial or ESL courses that have been manually rebuilt in ctcLink from a legacy transcript record in this Maximum Attempted Units Test. This is a known issue that will be addressed in the upcoming SAP project [Item #6B: Transfer Credits in Calculation \(MAXT\)](#).

# Maximum Attempted Units and Course Exclusions - What Was the Bug?

The SAP program reads the Student Enrollment record, compares the enrolled courses to the Course Exclusions list, and counts the number of Attempted Units the student had in Remedial courses and ESL courses.

The program compares the sum of ESL courses the student was enrolled in and compares that sum to the **Max ESL Units to Exclude** configuration value.

- If the sum of the ESL courses is less than the maximum configured, then it will exclude the sum from the total Attempted Units calculation.
- If the sum of the ESL courses exceeds the maximum configured, then it will use the configured value to exclude from the total Attempted Units calculation.

The program also compares the sum of Remedial courses the student was enrolled in and compares that sum to the **Max Remedial Units to Exclude** configuration value.

- If the sum of the Remedial courses is less than the maximum configured, then it will exclude the sum from the total Attempted Units calculation.
- If the sum of the Remedial courses exceeds the maximum configured, then it will use the configured value to exclude from the total Attempted Units calculation.

If either Max Units to Exclude value is left blank, then the program, which requires a number to function, uses a default maximum value of 999.99 units.



**ORACLE BUG:** If the sum of Remedial courses exceeds the **Max Remedial Units to Exclude** value, then the program *is supposed to* use the configured **Max Remedial Units to Exclude** value as the final value to exclude from the total Attempted Units amount. However, it instead points to the **Max ESL Units to Exclude** value, using that configuration value to subtract from the total Attempted Units amount. Since the **Max ESL Units to Exclude** is set to [blank], it uses the default 999.99 value, which it then subtracts from the total Attempted Units amount, resulting in a negative number.

#### SAP Calculation Results

Test	Used	Actual	Rule Range From	Rule Range To	Failed	Status	Severity	Exception Used	Term
Academic Standing	N		NA	NA	<input type="checkbox"/>			NA	
Maximum Attempted Units	Y	-805.990			<input type="checkbox"/>	MEET	10	N	NA
Maximum Attempted Terms	N							N	NA
Minimum Current GPA	Y	3.800				MEET	10	N	NA
Minimum Cumulative GPA	Y	3.340				MEET	10	N	NA
Current Earned Units	Y	10.000				MEET	10	N	NA
Cumulative Earned Units	Y	151.000				MEET	10	N	NA
Two Year GPA	Y	3.340			<input type="checkbox"/>	MEET	10	N	NA

When a student's total Remedial units exceeds the configured maximum, the SAP program calculates the Maximum Attempted Units, and erroneously returns a negative number.

#### SAP Calculation Data

Current Units Attempted	10.000		
Cumulative Units Attempted	194.000	Cumulative Earned Units Pct	77.84 %
Two Year NUM of Terms	15		

- Compare the Remedial Units to the Max Remedial Units value to determine total units to be excluded

$$\begin{array}{|c|} \hline \textbf{55 Units} \\ \textit{(Total Attempted Remedial Units)} \\ \hline \end{array} > \begin{array}{|c|} \hline \textbf{45 Units} \\ \textit{(Max Remedial Units to Exclude)} \\ \hline \end{array} = \begin{array}{|c|} \hline \textbf{999.99 Units} \\ \textit{(Total Remedial Units that will be excluded)} \\ \hline \end{array}$$

- Compare the ESL Units to the Max ESL Units value to determine total units to be excluded

$$\begin{array}{|c|} \hline \textbf{5 Units} \\ \textit{(Total Attempted ESL Units)} \\ \hline \end{array} > \begin{array}{|c|} \hline \textbf{999.99 Units} \\ \textit{(Max ESL Units to Exclude)} \\ \hline \end{array} = \begin{array}{|c|} \hline \textbf{5 Units} \\ \textit{(Total ESL Units that will be excluded)} \\ \hline \end{array}$$

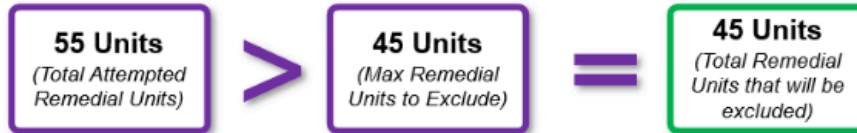
- Calculate the final Attempted Units value

$$\begin{array}{|c|} \hline \textbf{160 Units} \\ \textit{(Total Attempted Units)} \\ \hline \end{array} - \begin{array}{|c|} \hline \textbf{5 Units} \\ \textit{(Total ESL Units)} \\ \hline \end{array} - \begin{array}{|c|} \hline \textbf{999.99 Units} \\ \textit{(Max ESL Units value)} \\ \hline \end{array} = \begin{array}{|c|} \hline \textbf{-844.99 Units} \\ \textit{(Final Max Attempted Units calculation)} \\ \hline \end{array}$$

## The Solution

- Copy the delivered Application Engine (AE) code for the Maximum Attempted Units Test
- Modify the copy to point to the Max Remedial Units to Exclude value when a student's total Remedial Units exceeds what is in the configuration
- Set the college's Maximum Attempted Units Test to point to the custom Application Engine

- Compare the Remedial Units to the Max Remedial Units value to determine total units to be excluded



- Compare the ESL Units to the Max ESL Units value to determine total units to be excluded



- Calculate the final Attempted Units value



## Steps in the Test Process

- **Run SAP for Max Attempted Units**
  - Select Student Population for Testing
  - Calculating SAP Per Student - *Run to test for individual students BEFORE attempting to test a larger group.*
  - Process SAP in Batch - *Run to test for groups of students AFTER attempting to test a individual students.*
  - Verify Test Outcomes

## Test Scope

### In Scope for Testing Bug Fix:

- Financial Aid applicants who have taken Remedial or ESL courses AND
  - Had their academic transcript history converted at Go Live
  - Enrolled for Remedial or ESL courses after your college went Live on ctcLink


### Out of Scope for Testing Bug Fix:

- Students who have had their Remedial or ESL courses manually rebuilt in ctcLink from a legacy transcript record.
  - The enhancement that is designed to address this population will come with the [FA SAP Maintenance Item #6B](#).



# Selecting Your Student Populations for Testing

- Identify a list of at least 5-10 students who have Remedial or ESL coursework in their academic history from conversion and from ctcLink enrollment. Since manually rebuilt transcript students are considered 'out of scope' for this test activity, focus on Financial Aid students who have attempted remedial or ESL coursework during an enrollment period when the college was on ctcLink or were part of your converted student population.
- Find impacted students who currently have a negative Attempted Units value from the Maximum Attempted Units Test calculation to confirm that this bug fix corrects the calculation.
  - Use [Schedule Query](#) to run the query QCS\_FA\_SAP\_NEGATIVE\_MAXT\_BUG to find these students
- Test for other data conditions beyond just those impacted by the bug itself to ensure that the program changes did not adversely effect other students' SAP Test results.
- Review the [Recommended Test Scenarios](#) section of this guide to ensure there is at least 1 student (although more than 1 is recommended) per scenario.
- If your college does not have a student that meets a particular criteria you can work with the FA Support Team to determine if another college is covering this scenario or determine how to stage a student that meets that criteria.

 If the student's SAP won't calculate, you may need to check the student's FA Term and make sure that it has an Active row. (QRG: [9.2 Building an FA Term](#))

## Recommended Test Scenarios

### Converted Students with 'Remedial' Courses:

- FA Applicant with Converted Enrollment who have Remedial courses under 45 credits in their transcript history.
- FA Applicant with Converted Enrollment who have Remedial courses over 45 credits in their transcript history.

### ctcLink Enrolled Students with 'Remedial' Courses:

- FA Applicant with ctcLink Enrollment who have Remedial courses under 45 credits in their transcript history.
- FA Applicant with ctcLink Enrollment who have Remedial courses over 45 credits in their transcript history.

### ctcLink Enrolled or Converted Students with no ESL or Remedial Courses:

- FA Applicant with Converted Enrollment and no ESL or Remedial credits in their transcript history.

- FA Applicant with ctcLink Enrollment and no ESL or Remedial credits in their transcript history.

## Optional Test Scenarios

The following test scenarios require you to configure Course Exclusions in the testing environment to include courses with an "ESL" Course Type, which colleges have not configured up to this point.

### **Converted Students with ESL Courses:**

- FA Applicant with Converted Enrollment who have ESL courses in their transcript history.

### **Converted Students with both ESL and Remedial Courses (if applicable):**

- FA Applicant with Converted Enrollment who have both ESL and **under** 45 credits Remedial courses in their transcript history.
- FA Applicant with Converted Enrollment who have both ESL and **over** 45 credits Remedial courses in their transcript history.

### **ctcLink Enrolled Students with ESL Courses:**

- FA Applicant with ctcLink Enrollment who have ESL courses in their transcript history.

### **ctcLink Enrolled Students with both ESL and Remedial Courses (if applicable):**

- FA Applicant with ctcLink Enrollment who have both ESL and **under** 45 credits 'Remedial' courses in their transcript history.
- FA Applicant with ctcLink Enrollment who have both ESL and **over** 45 credits 'Remedial' courses in their transcript history.

## Relevant Quick Reference Guide Materials

- [9.2 Calculating SAP Per Student](#)
- [9.2 Maintain Student SAP Data](#)
- [9.2 Process SAP in Batch](#)
- [9.2 Processing Standard SAP in Batch Video \(For Reference Only - Does Not Specifically Address Oracle Bug - \)](#)

## How to Verify Your Test Outcomes

**Navigation:** Navigator > NavBar > Financial Aid > Satisfactory Academic Progress > Maintain Student SAP Data

Student SAP | Career Exceptions | Term Exceptions

Student SAP

Term: 2233 SPRING 2023 Updated: User ID

Program: ACADM Academic

Plan: EEOCEAS Engineering MRP: CompElect

Calc SAP Status: MEET Meets SAP

Override SAP Status:

Packaging Status Summary: Meeting Satisfactory Progress View Packaging Status Summary

Comments:

SAP Calculation Results

Test	Used	Actual	Rule Range From	Rule Range To	Failed	Status	Severity	Exception Used	Term
Academic Standing	N		NA	NA				NA	NA
Maximum Attempted Units	Y	-849.990				MEET	10	N	NA
Maximum Attempted Terms	N						10	N	NA
Minimum Current GPA	Y	2.000					10	N	NA
Minimum Cumulative GPA	Y	2.860					10	N	NA
Current Earned Units	Y	8.000					10	N	NA
Cumulative Earned Units	Y	135.000					10	N	NA
Two Year GPA	N	2.860						N	NA

The Oracle delivered SAP program produces a negative Attempted Units value when the student's total Remedial units exceed the maximum set on the Course Exclusions setup. This should never be a negative number, and should be calculated correctly.

SAP Calculation Data

Current Units Attempted	8.000	Current Earned Units Percent	100.00 %
Cumulative Units Attempted	150.000	Cumulative Earned Units Pct	90.00 %
Two Year NUM of Terms			

Processing Information

Process User Id: SFA\_SAP\_BORV

Process Date/Time: 03/29/23 10:04:18AM

Processing Message: Statistics Calc Pass 2, Term 2195

Save | Return to Search | Notify | Update/Display | Include History | Correct History

## Failed Result:

- Maximum Attempted Units value a negative number or incorrectly calculated

## Passed Result:

- Maximum Attempted Units value 0 or greater and correctly calculated

# Security Matrix Mapping Information



The information below provides those completing the Security Matrix Mapping templates with the Menus, Pages and Role names needed to execute the User Acceptance Testing relevant to this UAT guide.

Running SAP via Batch Process:

MENU: Main Menu > Financial Aid > Satisfactory Academic Progress > Process SAP

ROLE NAMES: ZC FA Funct Analyst and ZZ FA SAP Prcs

Running SAP via Maintain Student SAP Data page:

MENU: Main Menu>Financial Aid>Satisfactory Academic Progress>Maintain Student SAP Data

ROLE NAMES: ZC FA Funct Analyst and ZZ FA SAP Prcs