



# GPA Module

Release 8.0



"Technology has limitations on what it can accomplish. You do not..."

Lou Gerstner

CEO  
IBM

## Contents

Introduction .....	3
Administration Setup Tasks .....	4
SYS301.FMX Academic Levels .....	4
SYS266.FMX Standard Course Detail .....	5
School Level Forms .....	6
SCH050.FMX Course Maintenance .....	6
SCH121.FMX GPA Module Start Screen .....	7
SCH102.FMX School Reporting Dates .....	8
SCH160.FMX Mark Scale Entry .....	13
SCH103.FMX GPA Type Criteria .....	15
SCH104.FMX Review Calculated GPAs .....	22
Review GPA Calculation.....	24
Reports .....	27
STU436P.FMX General Student Ranking .....	27
STU439P.FMX Student GPA Detail Report .....	28
STU439R.REP Student GPA Detail Report .....	30
Appendix A: GPA Formula.....	32

© The Administrative Assistants Ltd. 2004. All rights reserved.

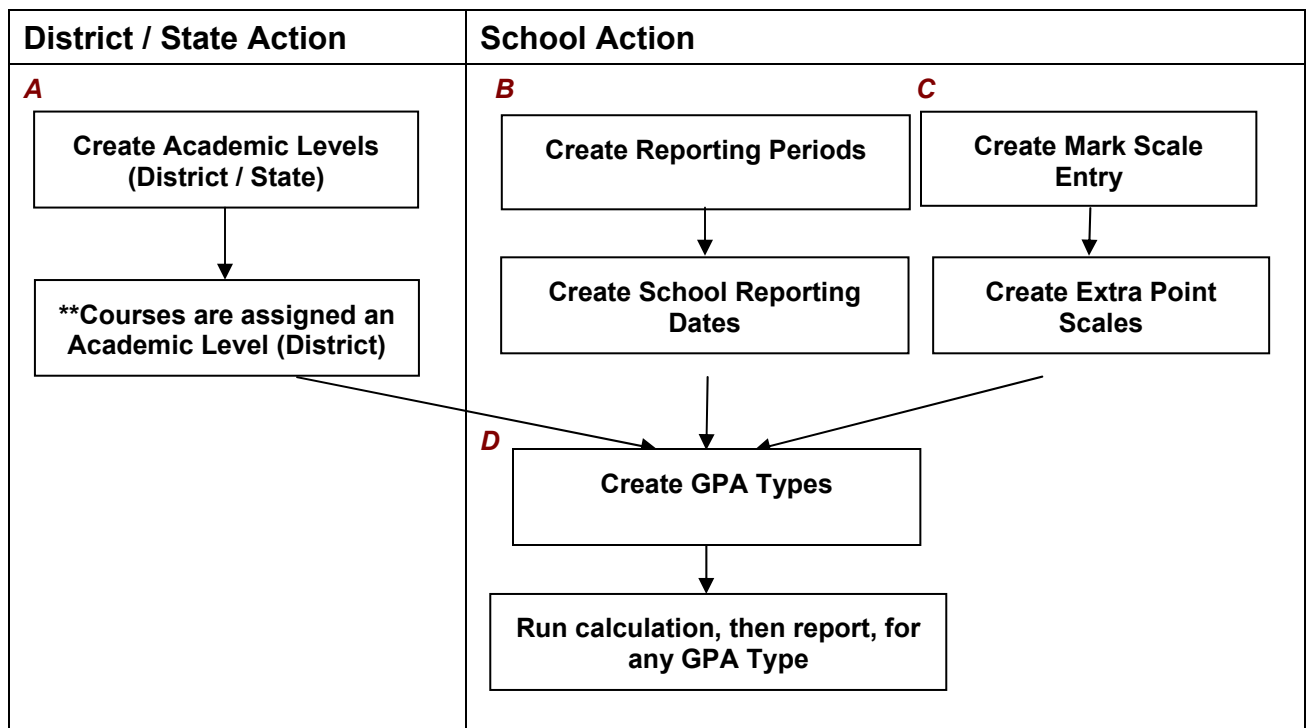
**eSIS**<sup>®</sup> is a registered trademark of The Administrative Assistants, Ltd. 2000 - 2004

# Introduction

The purpose of this Guide is to give you information on how to set up and use **eSIS** when running a GPA. It will detail the calculation methods available for running a GPA and the reports available for listing student GPA rankings.

**GPA** – Grade Point Average – is an important calculating feature with **eSIS**. The **eSIS** GPA Module was designed to permit extensive flexibility when creating multiple GPA calculations. These calculations can be used by schools to provide a wide variety of ways to rank students and to report academic achievement.

There are seven components to the GPA Module. The first three can be thought of as setup functions; the next four are used repeatedly throughout the year to calculate specific performance metrics and reports on those metrics for all students, a single student, or a user-defined group of students. The **GPA Process Model** below is a pictorial that quickly illustrates the areas that this Guide will cover.



**\*\*Note:**

- If Enforce Standard Courses is “on” and Academic Level is left blank  
**or**
- Enforce Standard Courses is “off” in the Company File

Then the Academic Level action is a School action not a District action.

# Administration Setup Tasks

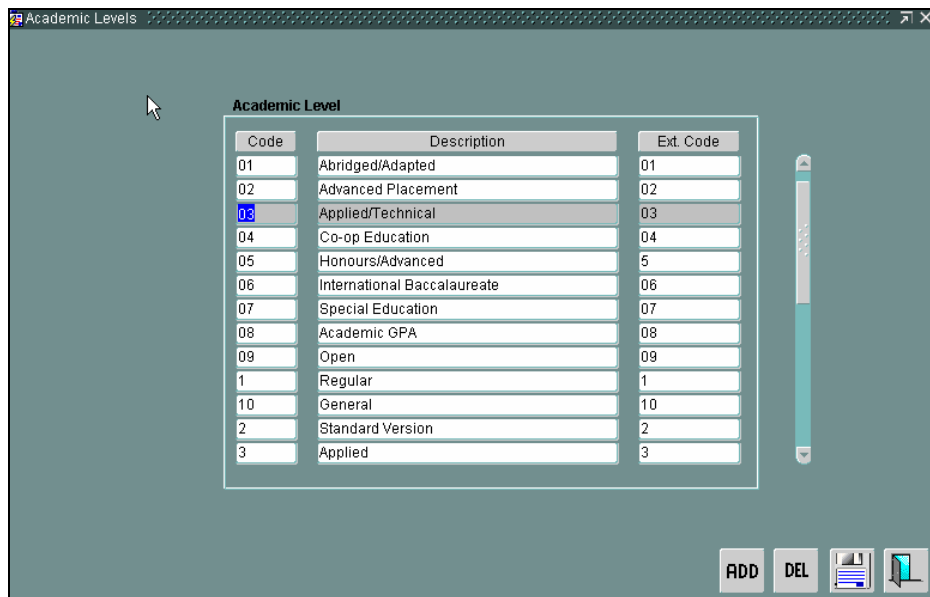
## SYS301.FMX Academic Levels

Path: *System Codes > Courses > Academic Levels*

The Academic Level codes are used to indicate that a course may be 'weighted'. Any course that should receive extra GPA points during the GPA calculations **must be assigned** an Academic Level.


Academic Level system codes will populate drop down lists on:

- ✓ Course Maintenance – SCH050
- ✓ GPA Type Criteria – SCH103
- ✓ Standard Courses Detail – SYS266

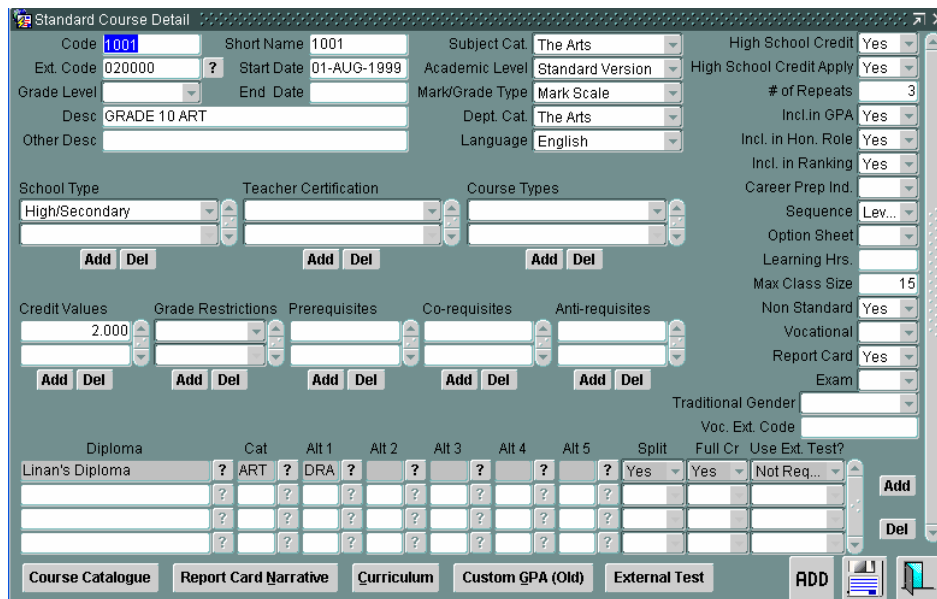


## SYS266.FMX Standard Course Detail

*Path: System Codes > Courses Category > Standard Courses*

If the District / Enterprise has determined that the Academic Level for (some or all) courses will be mandatory across all schools, then the appropriate level will be entered in the Standard Course Detail screen and the setting in the Company File > School tab will indicate - .

**Note:** If this field is left null in Standard Course Detail, schools will be able to assign an Academic Level in their own Course Maintenance – SCH050 screen.



The screenshot displays the 'Standard Course Detail' window with the following fields and values:

- Code: 1001, Short Name: 1001, Subject Cat: The Arts, High School Credit: Yes
- Ext. Code: 020000, Start Date: 01-AUG-1999, Academic Level: Standard Version, High School Credit Apply: Yes
- Grade Level: (empty), End Date: (empty), Mark/Grade Type: Mark Scale, # of Repeats: 3
- Desc: GRADE 10 ART, Dept. Cat: The Arts, Language: English
- School Type: HighSecondary, Teacher Certification: (empty), Course Types: (empty)
- Credit Values: 2.000, Grade Restrictions: (empty), Prerequisites: (empty), Co-requisites: (empty), Anti-requisites: (empty)
- Traditional Gender: (empty), Voc. Ext. Code: (empty)
- Diploma: Linan's Diploma, Cat: ART, Alt 1: DRA, Alt 2: (empty), Alt 3: (empty), Alt 4: (empty), Alt 5: (empty), Split: Yes, Full Cr: Yes, Use Ext. Test?: Not Req...

**Note:** When Enterprise level exists, an override option can appear to modify the course description in the Standard Course Detail screen, the Course Maintenance screen (SCH050), and Credit Details screens (STU160/STU164) when standard course information is enforced. This allows districts and schools to define their own course descriptions, and provides the ability to change the course descriptions defined at the Enterprise or District level when standard course information is being enforced.

- When 'Enforce Std Crs at School Level' = Yes, the override option appears in SYS266. The default is set to either Null or No(Null for Enterprise, No for District).
- When 'Allow Crs Desc Override'= Yes, you can change the course description at any lower levels:
- When 'Allow Crs Desc Override'= No, current eSIS functionality prevails (results depend on how the enforcement options are set)

- When 'Enforce Std Crs at School Level' = No, the new override option will not appear in SYS266 and current eSIS function prevails (no enforcement at the

## School Level Forms

### SCH050.FMX Course Maintenance

**Path:** School > Course Information > Course Maintenance

If the Academic Level field was entered in the Standard Courses system code, it will automatically populate that field in Course Maintenance, if it was left null, schools will be able to select this field from the drop down list.

The screenshot shows the 'Course Maintenance' form with the following visible fields and values:

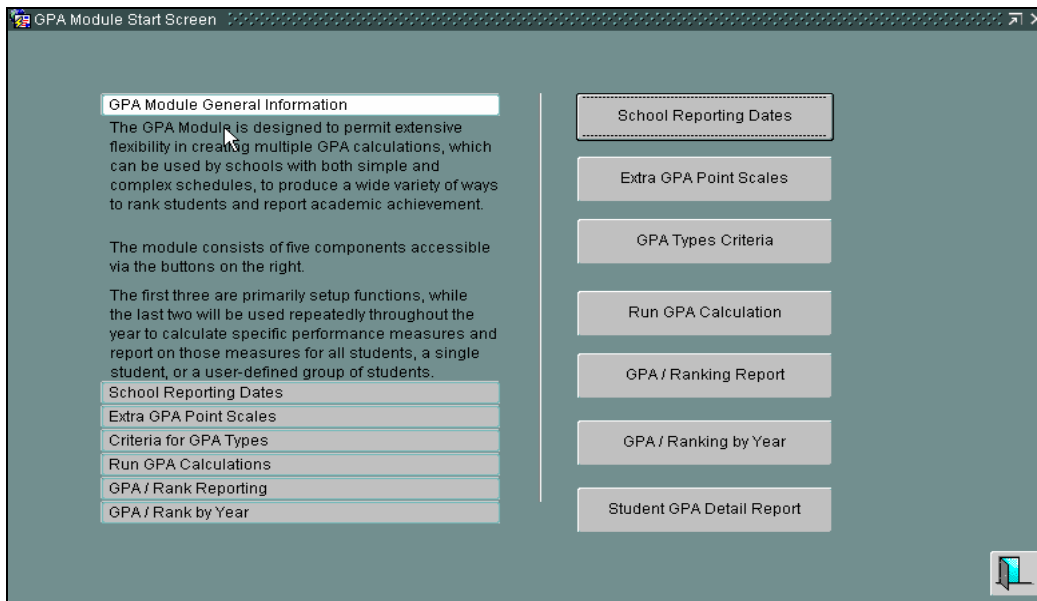
- School: 4444
- Name: TM'S HIGH SCHOOL
- School Year: Current
- Course/Title: BIO301A Biology Gr 11
- Lang of Instruct: English
- Short Name: BIO301A
- Credit Value: 1.000
- Hours: [empty]
- Mark/Grade Type: Mark Scale
- External Code: [empty]
- Times for Credit: 1
- Units: [empty]
- Subject Category: Science
- Course Type: [empty]
- HS Credit?:
- HS Credit Apply?:
- Ranking?:
- Median Length: [empty]
- Hon. Roll?:
- GPA Multiplier: [empty]
- Target/Maximum PTC: [empty]
- Coop In/Out School Hours: [empty]
- Service Learning Hours: [empty]
- Course Seq: [empty]
- Exam?:
- Report Card?:
- Parent Interface?:
- Coop?:
- Non-Standard?:
- Career Prep?:
- Vocational?:
- Multi Sem Finals?:
- Need Counsellor?:
- Approval To Repeat?:
- Grade Level: 11
- # of Sections: 2
- Course Length: 18 weeks
- Option: 37
- Default Sem: [empty]
- Do Not Replace by Global Alternate:
- Format: Full Semester
- Study Hall?:
- Lunch?:
- Option Sheet?:
- Department: Science
- Sub Dept: [empty]
- Consecutive Periods: 1
- Preferred Loading: None
- Weight: [empty]
- Min/Max Class Size: [empty] 2
- Max Sec/Per: 1
- Gender Restriction: [empty]

The 'Academic Level' dropdown menu is highlighted with a red box and shows 'Advanced Placement' selected.

## SCH121.FMX GPA Module Start Screen

**Path:** School > GPA Module

The GPA Module Start Screen is the ‘home base’ for the GPA calculation processes within eSIS. The GPA Module may be used to define any number of ‘custom’ GPA calculations that the school may choose to run. The GPA Module works with criteria that have been entered in Course Maintenance–SCH050, Mark Scale Entry–SCH160, and Reporting Periods–SCH100. Calculations may be based on specific courses, grades, programs, academic levels, and more.




<b>Field Name</b>	<b>Description</b>
Information buttons	Click each button to view details about the function
School Reporting Details Button	Calls SCH102-School Reporting Dates reflect the reporting timeline for a school. A Reporting Date will generally include <b>several</b> Reporting Periods (SCH100).
Extra GPA Point Scales Button	Calls SCH160 - Mark Scale Entry from which a sub-canvas may be accessed to setup extra points for the grades values.
GPA Types Criteria Button	Calls SCH103.GPA Type Criteria. This is where we establish which courses are to be awarded what grade point value and give this collection of criteria a name so that we can choose it when we run a calculation
Run GPA Calculation Button	Calls SCH104.Review Calculated GPAs. This is a list of prior GPA runs and we may choose to Add a new run, re-run one that is listed to update the calculation or produce the ranking report for an existing run.
GPA / Ranking Report	Calls SISRPTS. The Report Window for eSIS from which the SCH020R – GPA / Ranking Report may be selected.
GPA / Ranking by Year	Calls SCH122. GPA Ranking By Year.
Student GPA Detail Report	Calls STU439, a detailed ‘by course’ report outlining a student’s performance.

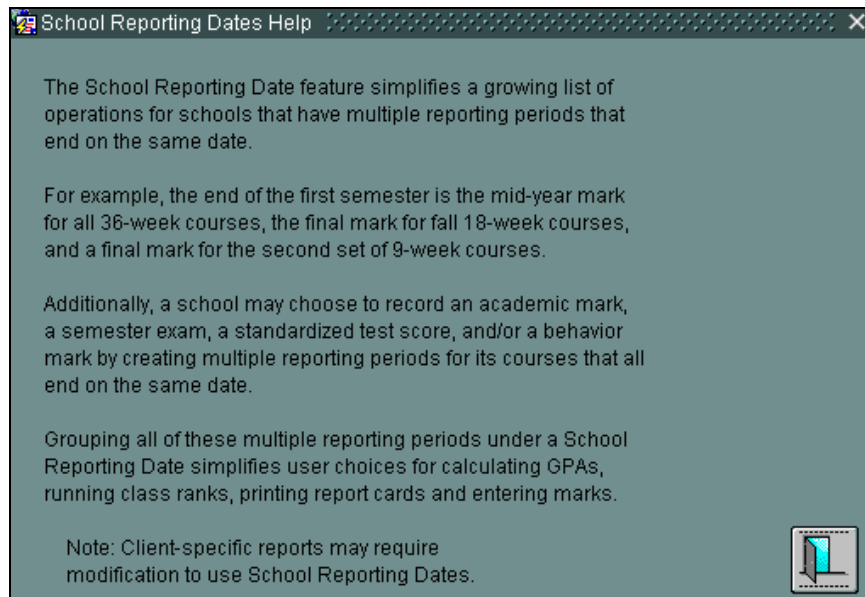


Standard Reporting Dates

Standard Reporting Dates

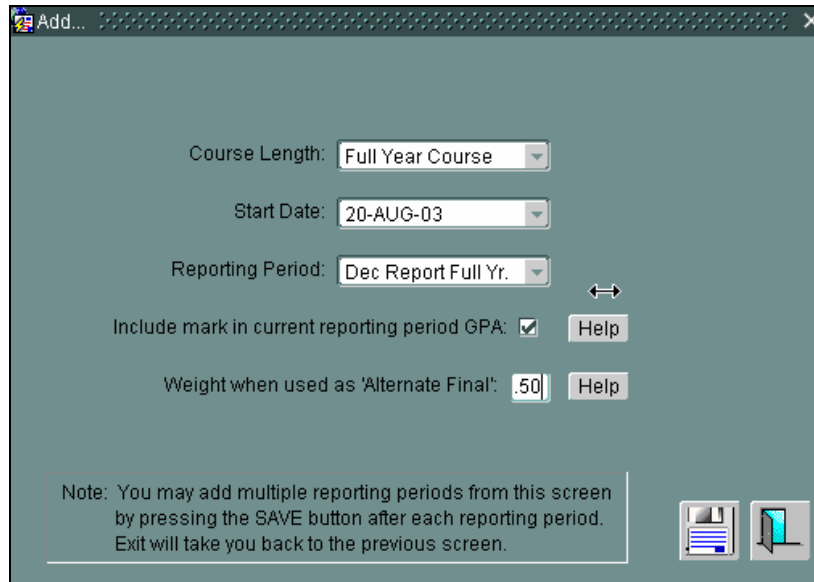
Code	Description
41	17-OCT-2003
42	19-DEC-2003
43	21-MAR-2004
44	04-JUN-2004
45	19-SEP-2003
51	01-JUL-2004
52	21-JUL-2004
53	17-DEC-2004
54	03-JUN-2005

The  button displays this useful information:



<b>Field Name</b>	<b>Description</b>
Reporting Date	Click the ADD button and enter a date for reporting
Course Length	Auto populates with the selection made by using the
Start Date	The Course Start Date. Short courses may have more than one. Auto populates with the selection made by using the ADD button at the bottom of the window
Reporting Period	Auto populates with the reporting period description based on selection made by using the ADD button at the bottom of the window.
End Date	Course End Date Auto populates with the selection made by using the ADD button at the bottom of the window
Final Mark?	Auto populates if the selected Reporting Period is a Final Reporting Period. Each course length can have only one Final Mark.
GPA Mark?	Auto populates with the selection made by using the ADD button at the bottom of the window. Indicates that marks from this Reporting Period will be used in GPA calculations. Final Marks should be included in the GPA
Weight	Populates from the 'Weight when used as 'Alternate Final' field that you will see when adding a Reporting Period to your GPA Reporting Date. See the Alternate Final Help screen for details on this feature.
Help Button	This button calls a screen of very useful details
ADD Button	The add button calls a canvas from which Course Length, Start Date and Reporting Period must be selected. This is also where the Final Mark and GPA checkboxes are enabled and where the weight may be entered
Edit GPA Mark / Weight Button	Use this button to edit the setup of GPA and weight for a Reporting Period that is not a Final Mark reporting period

To add a Reporting Date, **click** on the **ADD** button and make selections from the drop down lists.

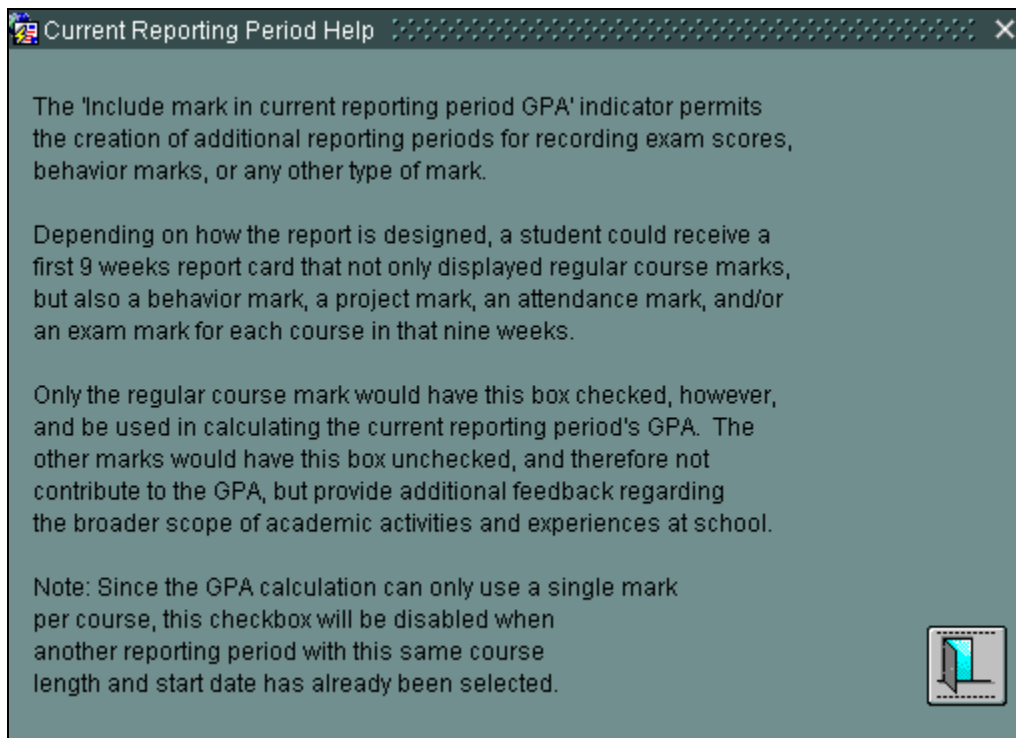


The screenshot shows a dialog box titled "Add...". It contains the following fields and controls:

- Course Length: Full Year Course (dropdown menu)
- Start Date: 20-AUG-03 (dropdown menu)
- Reporting Period: Dec Report Full Yr. (dropdown menu)
- Include mark in current reporting period GPA:  (checkbox) with a Help button to its right.
- Weight when used as 'Alternate Final': .50 (text input) with a Help button to its right.

At the bottom, there is a note: "Note: You may add multiple reporting periods from this screen by pressing the SAVE button after each reporting period. Exit will take you back to the previous screen." There are also icons for Print and Exit.

The Help button for the 'Include mark in current reporting period GPA' displays the following information:



The screenshot shows a dialog box titled "Current Reporting Period Help". It contains the following text:

The 'Include mark in current reporting period GPA' indicator permits the creation of additional reporting periods for recording exam scores, behavior marks, or any other type of mark.

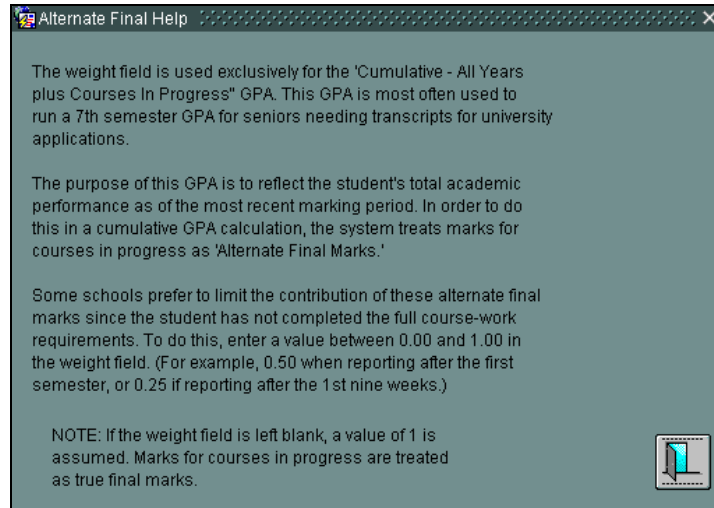
Depending on how the report is designed, a student could receive a first 9 weeks report card that not only displayed regular course marks, but also a behavior mark, a project mark, an attendance mark, and/or an exam mark for each course in that nine weeks.

Only the regular course mark would have this box checked, however, and be used in calculating the current reporting period's GPA. The other marks would have this box unchecked, and therefore not contribute to the GPA, but provide additional feedback regarding the broader scope of academic activities and experiences at school.

Note: Since the GPA calculation can only use a single mark per course, this checkbox will be disabled when another reporting period with this same course length and start date has already been selected.

There is a Help icon in the bottom right corner.

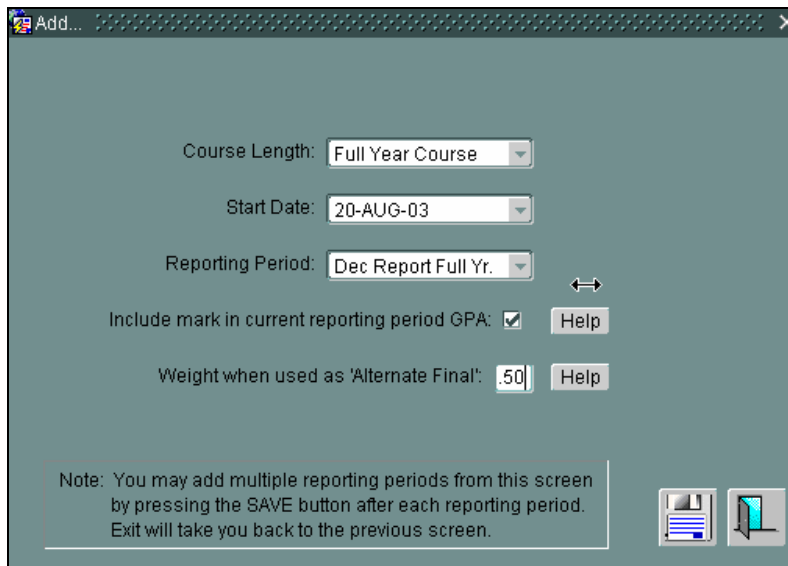
The Help button for the 'Weight when used as alternate final' contains the following:



### Edit GPA Mark/Weight

**Path:** *School > GPA > School Reporting Dates Button > Edit GPA Mark/Weight Button*

The Add screen re-appears and you may edit information previously entered as required.



## SCH160.FMX Mark Scale Entry

**Path:** School > Mark Information > Mark Scale Entry

This window is used to record how marks / grades will be converted from 'alpha' to 'numeric'; the numeric 'conversion' factor that will be used for alpha marks; whether or not receiving a specific mark will result in credit for 'compulsory categories'; and the Grade Point value that will be recorded for a course in which a student receives this mark. Note: While any character or group of characters may be identified as a valid mark, the normal practice of using – A, B, C, etc., is indicated in the screen below. Valid numeric marks have been identified internally in **eSIS** as being between 1 and 100. Mark Scale Entry is also used to identify a mark as a Pass or Fail. In addition, Extra GPA Points may be set up.

A **null** value in the Grade Point column will result in that grade **NOT** being included in GPA calculations. Be sure to enter all the appropriate grade point data.

Field Name	Description
School/Name	School number and Name
Pass/Fail	Enable the appropriate option to establish the corresponding grade as pass or fail
Alpha	An alpha character to be used in Mark Entry ... this could include dots and dashes
Low/High	The numeric range that is represented by the Alpha mark
Conv	A numeric Conversion value that will be used where Alpha marks must be converted to Numeric or vice-versa (specifically for GPA).
Report Card Legend	A text description that may be used on the Report Card as a legend. This depends on the client's report card design
Grade Point	The points assigned to the achievement of this grade
Level	This is a client specific field that populates to a field in the custom <b>Ontario</b> Mark Entry – SCH143 screen.
Extra GPA Point Scale Button	Used to setup extra point scales that may be used in the GPA module. Several such scales may be set and saved.
GPA 3.00	Client Specific.

## Extra GPA Point Scale Canvas

**Path:** School > Mark Information > Mark Scale Entry > Extra GPA Point Scale button

Ensure that you name the Extra GPA Point Scale something very descriptive. Later, when defining your GPA types, you will have to choose the appropriate scale based on this name. Having a description that states exactly the point scheme in the scale will make this choice much easier. Examples could be: Applied 1 Extra Point, 2 Extra Points, or even the name that matches the Academic Levels set in Standard Courses – Advanced Placement, etc.

Pass	Fail	Alpha	Low	High	Grade Points	Extra GPA Points
<input type="radio"/>	<input type="radio"/>	A	80	89	4	1.0000
<input checked="" type="radio"/>	<input type="radio"/>	A+	90	110	4	1.0000
<input type="radio"/>	<input type="radio"/>	B	70	74	3	
<input type="radio"/>	<input type="radio"/>	C	65	69	2	
<input type="radio"/>	<input type="radio"/>	D	60	64	1	
<input type="radio"/>	<input checked="" type="radio"/>	F	2	59	0	

## SCH103.FMX GPA Type Criteria

Path: School > GPA > GPA Types Criteria Button

Use the 5 tabbed screens displayed through this button to create your school's various GPA calculations or types. These GPA Types are the "business rules" determining how to calculate the GPA and the 'filtering' for which courses to include / exclude as well as weighting of courses.

Usually, at least one of the ways a school calculates the GPA is the Official GPA used for official transcripts, etc. Only **one** Official GPA Type can be created per school, but an unlimited number of unofficial GPAs may be created for producing various ranks, honor rolls, GPA within a major course of study, etc. The Official GPA can be written to the student's permanent record. This is the value that is displayed in the GPA and weighted GPA fields on the Student Diploma screen (STU552).

The GPA Type Criteria focuses only on including and/or excluding courses from the GPA calculation. Particular students can be excluded from the calculation when it is actually run by using the Demographic Extract function on the "Run GPA Calculation" screen.

Field Name	Description
5 Canvases	Create a GPA type by selecting criteria from each of the first 4 canvases. These criteria are cumulative. The final canvas displays courses meeting the selected criteria. It is recommended that you click the Clear All Criteria button to ensure no unnecessary criteria from previous runs exist prior to beginning work in this area.

<b>Field Name</b>	<b>Description</b>
GPA Type	Set a name for this collection of criteria and make the desired selections of Course Codes, Course Types, How Taken and Number of Credits. All these criteria elements are set in SCH050.Course Maintenance.
Course Indicators	Select the desired course Indicators. This will cause the selection of courses that have the selected indicators enabled in SCH050. Course Maintenance
Weighting	Use this canvas to set this GPA type as the 'Official GPA'. There can only be one Official GPA and values can be stored on STU552. Student Diploma Screen. If required, set this GPA Type to calculate weighted GPA. The weighted GPA includes an Extra Point Scale. Unweighted is the default calculation and uses the GP set on the main canvas of SCH160. Mark Scale Entry. Note that courses which meet a specific Academic Level (as set on SCH050. Course Maintenance) can be linked to a specific Extra GPA Scale allowing one GPA Type to apply a different weight to several different Academic Level course groupings.
Students	A further 'filtering' selection to determine whether Courses or Credits will be the determining factor in the GPA calculations. None is also an available selection.
See Results	Click this Tab to view a list of courses defined by the criteria selections. Save if you are satisfied

## The GPA Type Tab

Create a new GPA and set up filtering criteria (which courses, course types, grade levels, etc) for each GPA you wish to utilize in this tab. The 'criteria' are set up in Course Maintenance – SCH050. Another criterion available for pulling GPA information includes the 'Number of Credits' field. From the drop down list you may select a filter setting (=, <=, >=, <, >) and then enter the number of credits to filter on – e.g. <= 3 would result in all courses meeting the other setting criteria AND with a credit value less than or equal to '3' would be selected.

The Course Grade Level field is for choosing if courses to be included in the GPA calculation should be filtered based on a particular course grade level, or not. Multiple course grade levels can be selected from the dropdown lists. Users can add another course grade level by clicking the Add button which will “unlock” the next dropdown list. To remove an unwanted selection, users can highlight (select) the unwanted option and click the Delete (Del) button. If you select the NOT checkbox, this causes the filter to use all EXCEPT the displayed course grade levels in the calculation.

**Note:** If this filter is used frequently, it is the responsibility of the user to ensure that when courses are defined, the course grade level field is populated since eSIS does not check the field is populated as it is an optional field on course creation.

- Pulls from SCHOOL\_GRADES\_TAUGHT table, GRADE column
- Multiple course grade levels may be selected
- If the NOT flag is checked, includes any course grades that are not selected

Validates selection so that you may not choose the same dropdown item on an Add of another filter option

GPA Type Criteria

School: 132 Bronze Land HS

GPA Name: GPA Run 1    GPA is Valid from To: 01-SEP-2003    GPA Reporting Type Code: [Dropdown]    Add Del

**Course Code**    **State Course Code**    **Course Type**

NOT [Dropdown]     NOT [Dropdown]     NOT Advanced Plac... [Dropdown]

Add Del    Add Del    Add Del

**How Taken**    **Course Grade Level**    **Number of Credits**

NOT Day School... [Dropdown]     NOT [Dropdown]    <= 3

Add Del    Add Del

Clear All Criteria

### Course Indicators Tab

The second tab of the GPA Type Criteria indicates that this GPA will also include course that have been designated “Include in GPA” in Course Maintenance. Each “Include” option seen here is considered as an AND condition.

GPA Type Criteria

GPA Type    Course Indicators    Weighting    Students    See Results

Click to INCLUDE any courses marked as:

Include in GPA

Include on Report Card

Include in Ranking

Include in Honor Roll

High School Credit (check = Yes)

NOTE:  
Checking one of the indicators on the left will cause the GPA calculation to use only courses that have the indicator set in their course definition.

Clear All Criteria

## Weighting Tab

The third tab of the GPA Type Criteria - Weighting – allows you to designate this GPA as ‘Official’ and / or calculated both Weighted and Unweighted GPA values. If the GPA is designated ‘Official’ (there can be only ONE official GPA remember), the values will store to the Student record. If the GPA is to be both weighted and unweighted, the appropriate Academic Level and Extra Point Scale must be selected.

The screenshot shows a web application window titled "GPA Type Criteria" with five tabs: "GPA Type", "Course Indicators", "Weighting" (selected), "Students", and "See Results".

Under the "Weighting" tab, there are two questions:

- Is this the official GPA that should be printed on the transcript?**  
 Yes, this is the Official GPA
- Will this GPA be used to calculated both Weighted and Unweighted values?**  
 Yes, use the selections below to produce the weighted value of this GPA

A note box on the right states: "Note: the official GPA can be stored on the student's permanent record. These stored values are displayed on the Diploma screen."

Below the questions is a section titled "Please select an Academic Level and corresponding Extra Point Scale". It contains two columns of dropdown menus:

- Academic Level:** The first dropdown is set to "Advanced Placement".
- Extra Point Scale:** The first dropdown is set to "Extra Point".

There are three empty rows below the first row in each column. To the right of these dropdowns are "Add" and "Delete" buttons. At the bottom of the window, there is a "Clear All Criteria" button and three small icons (a mouse cursor, a printer, and a monitor).

## Students tab

In this screen, you may select how many ‘top’ courses (the top 8 courses) or credits students must possess to be included in the GPA run. Any students in the Demographic Extract that do not possess this number should not be included in the calculations.

The Number of Top Courses/Credits To Use In Calculation field is for indicating the threshold of how many courses/credits should be used in calculating each student’s GPA. Whether the number relates to courses or credits depends on which radio button is selected (there is a toggle between courses and credits). When None is selected as the radio button option, you cannot enter a number in this field.

Anti requisite courses need to be processed to avoid counting credits for both. The number indicated is used for all students pulled in the demographic extract. If nothing is selected (ie, the selection is blank), all courses/credits will be included in the calculation.

- If the 'blank' is selected, includes all courses/credits in the calculation
- Validates data entered in field to ensure it is a valid value
- "Top" refers to the courses with the highest mark, therefore, if the credits GPA is used and 32 credits is selected, system looks for the courses with the highest marks up to and including 32 credits worth; if the threshold has not been reached yet, uses the course in the GPA calculation; if the sum of the credits is higher than the number of credits selected (ie, you only need to use 2 of the course's 4 credits to make up 32 credits), the course with the lowest mark is weighted accordingly, using the following calculation:
  - divides the credits still needed before meeting the threshold by the number of credits in the next available course to determine the weighting factor to be applied against the GPA of the next course being used to meet the threshold
 ie, the weighting factor is determined as:
  - credits needed / credits in next available course = weighting factor
  - GPA of next available course \* weighting factor = the GPA percentage to use in the calculation

If the courses GPA is used and 8 courses is selected, looks for the courses with the 8 highest marks; when the 8<sup>th</sup> is reached and 2 courses have the same mark, uses the course with the greater credit value; if credit values are equal, uses the course taken first

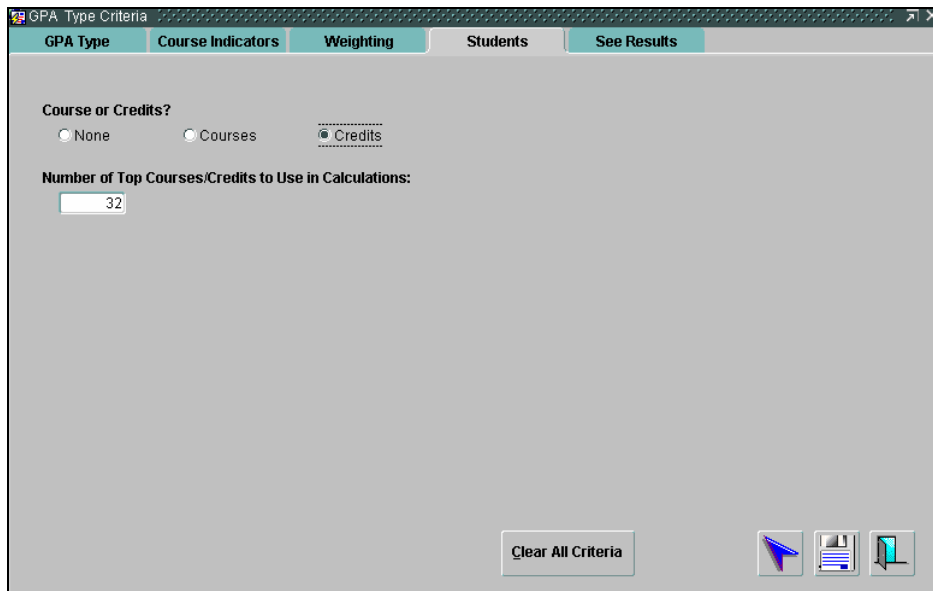
**Example:**

weighting factor example:

<u>credits</u>	<u>GPA</u>
2	4
3	4
4	4

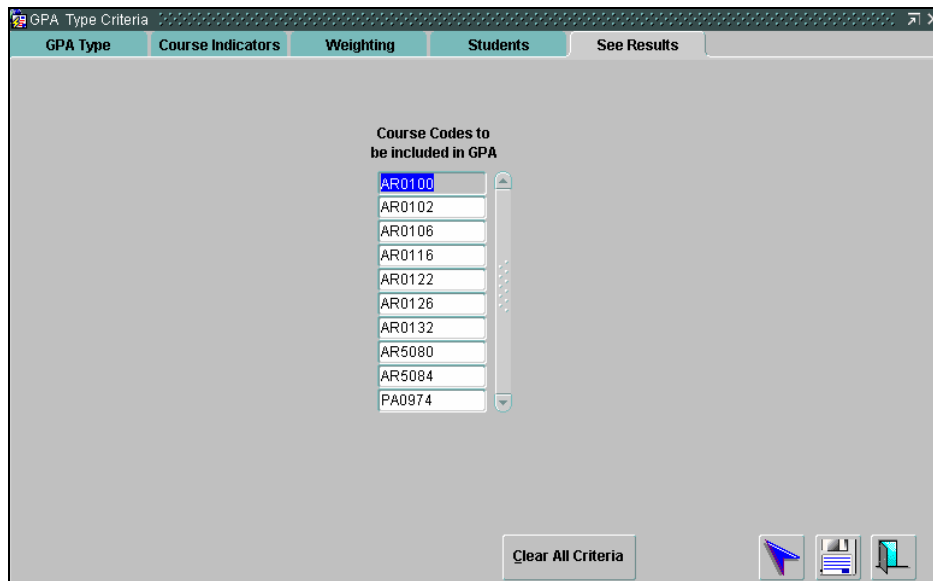
if the threshold is 7 credits, the first 2 courses included sum to 5 credits, still needing 2 to meet the threshold; the next available course is 4 credits; the weighting factor is determined as:

- $2 / 4 = 0.5$  (credits needed / credits in next available course = weighting factor)
- $4 * 0.5 = 2$  (GPA of next available course \* weighting factor = the GPA percentage to use in the calculation)



### See Results tab

This tab displays the list of courses that fit the criteria established in the previous tab selections. Select the Save button and exit the screen to continue your GPA calculation tasks.





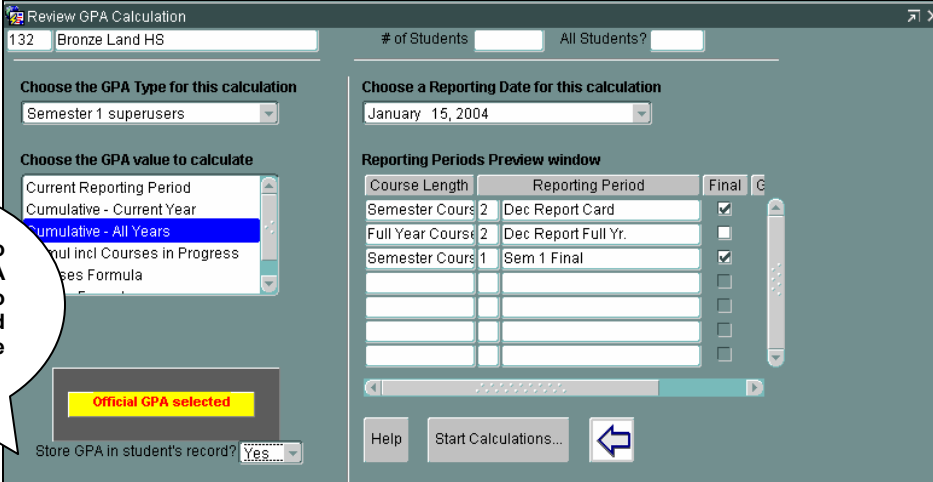
## Table of Fields – Review Calculated GPAs

<i>Field Name</i>	<i>Description</i>
GPA Type	The name of the GPA Type that was run
Report Date	The Date the GPA was run
All Students	Y indicates that the GPA was run for all students. A run could be based on the Demo Extract for a select group of students.
Number	The number of students in the run as selected through the Demographic Extract run.
Calculated GPA	What is the description of the GPA that was calculated. The choices include: Cumulative - Current Year, Cumulative – All Years, Current Reporting Period, Cumulative including Courses in Progress, Courses Formula, Credits Formula.
Stored	Was the GPA stored in the students' permanent record
Help Button	Calls a canvas containing useful details
Add New GPA	Calls another canvas of SCH104 where a GPA type, Reporting Date, Value (Current, Cumulative...) and Demo Extract may be applied to the run
Re Run Selected GPA	Updates the values in the run
GPA/Ranking Report	Calls SISRPTS, the Reports Window from where SCH020R. GPA/Ranking Report may be selected

## Review GPA Calculation

**Path:** School > GPA > Run GPA Calculation > Add New GPA

In this screen, you will select the GPA Type you wish to run calculations for and the value you wish to run – Cumulative – All Years, etc. You will also select the Reporting Date that the GPA should use. The examples below display the differences in the screen depending on whether or not your GPA Type is 'Official'.

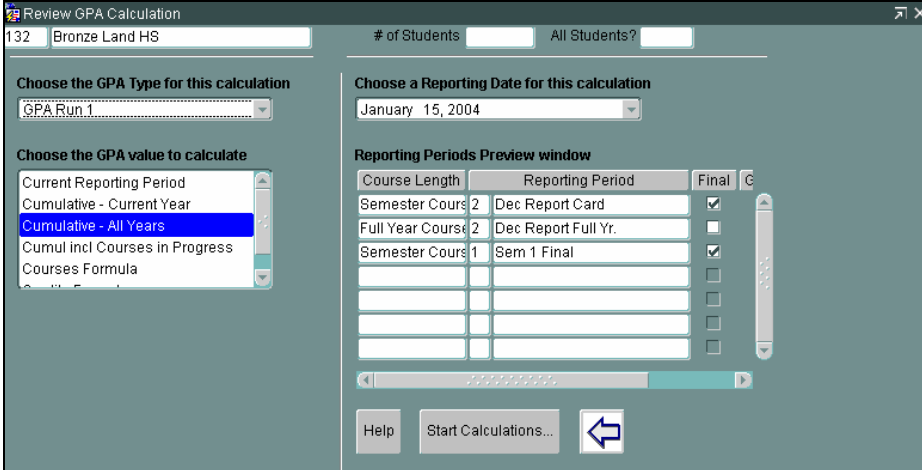


The screenshot shows the 'Review GPA Calculation' window for 'Bronze Land HS'. The 'Choose the GPA Type for this calculation' dropdown is set to 'Semester 1 superusers'. The 'Choose the GPA value to calculate' list has 'Cumulative - All Years' selected. The 'Choose a Reporting Date for this calculation' dropdown is set to 'January 15, 2004'. The 'Reporting Periods Preview window' table is as follows:

Course Length	Reporting Period	Final	C
Semester Course 2	Dec Report Card	<input checked="" type="checkbox"/>	
Full Year Course 2	Dec Report Full Yr.	<input type="checkbox"/>	
Semester Course 1	Sem 1 Final	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	

At the bottom, the 'Store GPA in student's record?' dropdown is set to 'Yes...'. A yellow box says 'Official GPA selected'. A callout bubble points to this dropdown with the text: 'If you say 'Yes' to Store, the GPA results will post to the Student record viewed in the Diploma screen.'

Not set up as 'Official' in GPA Criteria




The screenshot shows the 'Review GPA Calculation' window for 'Bronze Land HS'. The 'Choose the GPA Type for this calculation' dropdown is set to 'GPA Run 1'. The 'Choose the GPA value to calculate' list has 'Cumulative - All Years' selected. The 'Choose a Reporting Date for this calculation' dropdown is set to 'January 15, 2004'. The 'Reporting Periods Preview window' table is as follows:

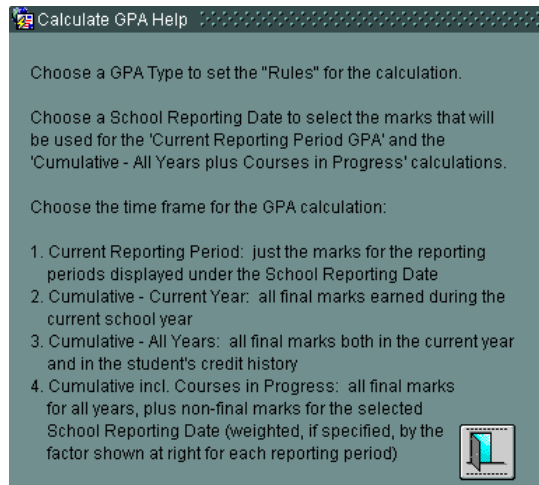
Course Length	Reporting Period	Final	C
Semester Course 2	Dec Report Card	<input checked="" type="checkbox"/>	
Full Year Course 2	Dec Report Full Yr.	<input type="checkbox"/>	
Semester Course 1	Sem 1 Final	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	

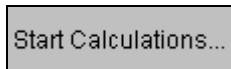
At the bottom, the 'Store GPA in student's record?' dropdown is set to 'No...'. The 'Official GPA selected' box is not present.

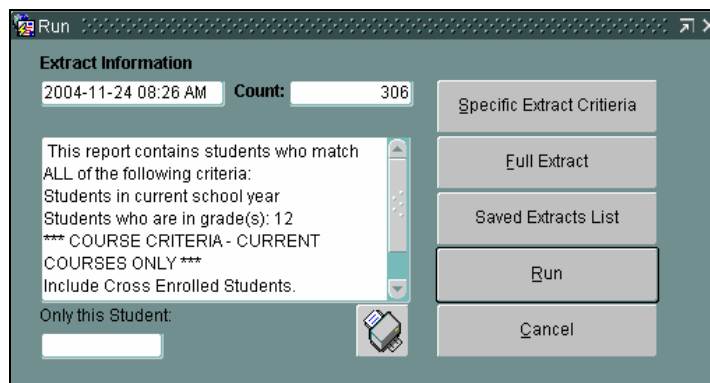
## Table of Fields – for the Review GPA Calculation screen

<i>Field Name</i>	<i>Description</i>
Choose the GPA Type for this calculation	Choose the type of GPA calculation to use. List populates from GPA Type Criteria – SCH103 information.
Choose the GPA value to calculate	<p><b>Select:</b> Current Reporting Period - to run the calculation for only that period.</p> <p><b>Select:</b> Cumulative – Current Year - to have the system check Credit History to see if the student had a previous school / course, and STU541 - Student Course Selections for any completed courses.</p> <p><b>Select:</b> Cumulative – All Years - to have the system check Credit History and Student Course Selections for completed courses for all years.</p> <p><b>Select:</b> Cumulative Incl Courses in Progress - to have the system check Credit History and Student Course Selections for completed with a final mark and current courses that do not yet have a final mark. The system will use any mark recorded for the student in the uncompleted courses to this point in time.</p> <p><b>Select:</b> Courses Formula if Courses was the choice in the ‘Students’ tab and you wish to run students against that choice. That is, if students have fulfilled the number of courses indicated in that entry AND appear on your Demographic Extract, they will be included in this GPA run.</p> <p><b>Select:</b> Credit Formula if Credits was the choice in the ‘Students’ tab and you wish to run students against that choice. That is, if students have fulfilled the number of credits indicated in that entry AND appear on your Demographic Extract, they will be included in this GPA run.</p>
Choose a Reporting Date for this calculation	Choose the reporting date for this calculation. List populates from School Reporting Dates – SCH102.FMX. A list of the Reporting Periods that will be used in the selected Reporting Date will automatically populate.
Reporting Periods Preview window	These periods auto-populate based on the Reporting Date selected above.
Help Button	Displays the Help canvas for some tips on the GPA calculation process.
Start Calculations Button	Displays the Run screen - SISRPTS.
Back Arrow Button	Returns you to SCH104 - Review Calculated GPAs main screen.

Click on the  button to display:


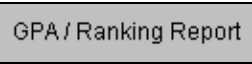


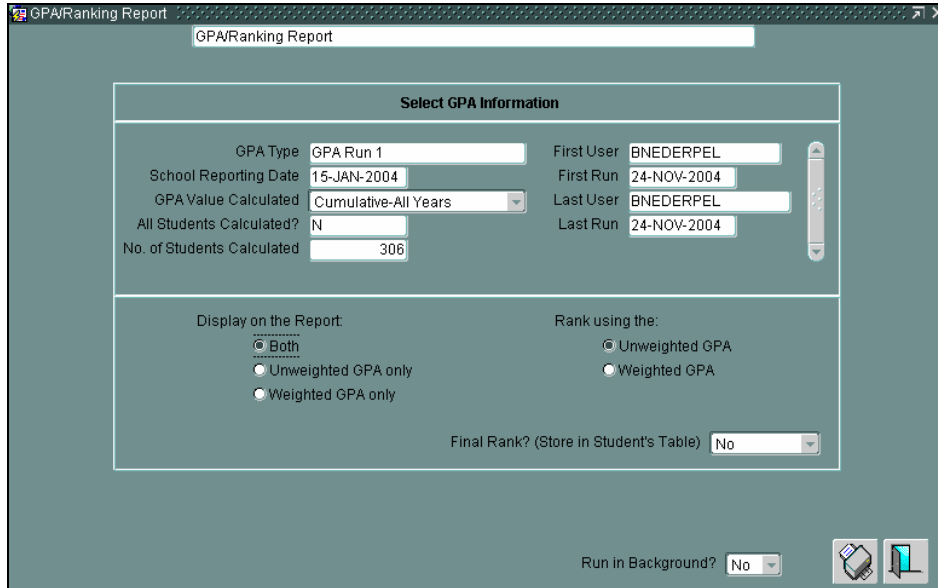
Click on the  button to bring you to the SISRPTS screen and run a Demographic Extract (if not already completed) to select the appropriate students for this GPA Calculation.



# Reports

## STU436P.FMX General Student Ranking

Select  and then select the  button to call up STU436P - GPA / Ranking Report parameter form seen below:



**Select GPA Information**

GPA Type	GPA Run 1	First User	BNEDERPEL
School Reporting Date	15-JAN-2004	First Run	24-NOV-2004
GPA Value Calculated	Cumulative-All Years	Last User	BNEDERPEL
All Students Calculated?	N	Last Run	24-NOV-2004
No. of Students Calculated	306		

Display on the Report:

Both  
 Unweighted GPA only  
 Weighted GPA only


Rank using the:

Unweighted GPA  
 Weighted GPA

Final Rank? (Store in Student's Table) No

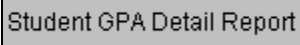
Run in Background? No

Review the 'Select GPA Information' block and ensure that you are running the GPA Type you wish to run AND that the GPA Value Calculated and No. of Students Calculated are correct. Your next decision is whether to display Unweighted GPA or Weighted GPA or Both on your report. Next, will you rank students by their Unweighted or Weighted GPA values. The final decision is whether or not to store these GPA values to the Student Table. If you say 'Yes', the GPA calculation and rank will replace the values currently viewable in the Diploma screen – STU552.

Select the  to run the following report outlining the students' GPA values and their rank within the Extract of students.

STU436R v4.0.03		Platinum District		Page: 1	
Bronze Land HS		GPA/Ranking Report		24 Nov 2004 02:06 PM	
<b>Ranked by Unweighted GPA</b>					
Grade: 12	Ranked out of 306	Avg. Unweighted:	3.0440	Avg. Weighted:	3.0440
<u>Student Name</u>	<u>Pupil No</u>	<u>Rank</u>	<u>Unweighted GPA</u>	<u>Weighted GPA</u>	
Bombadil, Daniel	10032520	1	4.0000	4.0000	
Gonzalez, Alexs	10035145	1	4.0000	4.0000	
Hill, Veronica	121621	1	4.0000	4.0000	
Rodriguez, Brittany	10030869	1	4.0000	4.0000	
Walker, Nancy	111540	1	4.0000	4.0000	
Coleman, Erika	10031151	6	3.9792	3.9792	
Taylor, Veronica	115071	7	3.9787	3.9787	
Miller, David	118068	8	3.9600	3.9600	
Robinson, James	102465	9	3.9592	3.9592	
Gonzalez, Nancy	102712	10	3.9583	3.9583	
Jones, Guadalupe	102560	10	3.9583	3.9583	
Lewis, Andrew	102427	12	3.9574	3.9574	

### STU439P.FMX Student GPA Detail Report

Selecting the  button calls **STU439P - Student GPA Detail Report** parameter form:

This Student GPA Detail Report shows the details used in calculating a student's GPA. The report will print in portrait orientation. For each student pulled in the extract, the details of the courses used by the GPA calculation are displayed. Student details include the student's name, the pupil number, and ministry number. The list of students is displayed sorted by last name. Course details include code, external code, credit value, and GPA multiplier. Other details displayed include the mark the student actually received in the course, the weight (extra points) used in the calculation, the corresponding weighted and unweighted GPA, and the reporting period of the course mark used in the GPA calculation. Additionally, the sum of both the weighted and unweighted GPA for each student is displayed.

This report can be printed for one or multiple students at a time; users can also indicate if withdrawn students should be included on the printed report. It can be run from SCH104 (Review Calculated GPAs) in the GPA Module, from SCH121 (GPA Module Start Screen), or directly from SISRPTS (the Reports Module Start Screen).

On the parameter form, the GPA information displays based on the GPA Run and school selected. These fields are effectively display-only, although you can F7/F8 query on them. If accessing the parameter form from SCH104 (Review Calculated GPAs), whatever is selected defaults and the user cannot change to a different GPA calculation. However, if the accessing the parameter form directly from SCH121 (GPA Module Start Screen) via the GPA/Ranking Report button, or from SISRPTS (the Report Module Start Screen), the user can cycle through all the GPA calculations available for the current school.

<b>Field Name</b>	<b>Description</b>
Report Name	The Report Name field is for the title of the report. This field defaults to “Student GPA Detail Report” but can be changed by the user. It prints in the bottom centre of the report header.
Selected GPA Information	<p>Displays either selected GPA if flowing in from SCH104 or the first GPA Type alphabetically if flowing in from SCH121 or SISRPTS.FMX v#.# Student Information System Reports.</p> <p>The selected GPA information section contains the details of the GPA calculation. Information includes GPA type, school reporting date, GPA value calculated, all student calculated flag, number of students calculated, name of first user to run the calculation and the date it was first run, and name of the last user to run the calculation and the date it was last run.</p> <p>These fields are display only, although you can F7/F8 query on them, based on school selected before coming into this screen. If the parameter form is accessed from SCH104 (Review Calculated GPAs), whatever is selected defaults and the user cannot change to a different GPA calculation. However, if the parameter is accessed directly from SCH121 (GPA Module Start Screen) via the GPA/Ranking Report button, or from SISRPTS (the Report Module Start Screen), you can cycle through all the GPA calculations available for the current school. In this latter case, the GPA information</p>

<b>Field Name</b>	<b>Description</b>
	displays alphabetically based on the GPA Type name.
Students	Indicates whether All students pulled in the extract should be printed on the report or if only selected students should be printed on the report.
Multiple	Executes the Select Students dialog where you can indicate one or more students that should be printed on the report.
Print Withdrawn Students?	Indicates if any students pulled in the extract who have a status of withdrawn should be included on the printed report. Leaving the checkbox unchecked excludes withdrawn students from the report.

This versatile report may be run for one student, multiple students (select the  button and then select the students for whom you wish to run the report) or all the students in your extract. The result as seen below, will list all credit and GPA information by course for each student in the extract.

### STU439R.REP Student GPA Detail Report

<b>Field Name</b>	<b>Description</b>
Student Details	The student details line displays for each student pulled in the demographic extract (including withdrawn students, if selected). It consists of the student name (in the format Last Name, First Name), the pupil number, and the ministry number.
Course Code	Code that identifies a course.
External Course Code	The external course code column is for the external code associated to a course.
Credit	Displays the available credit amount students can earn for the course.
GPA Multiplier	Displays the multiplier as defined on SCH050, if it exists; if it does not exist, displays "N/A" The GPA Multiplier column is for a value, that when multiplied by the credit value of a course, converts that value to 1. This is done to nullify the impact of the credit value on the calculation of GPA (to ensure all courses have the same weight prior to the application of an extra point scale). For example, if the credit value of a course is 2, the GPA multiplier used would be 0.5. The GPA multiplier is entered on SCH050 – Course Maintenance.
Mark	<p>The Mark column is for the grade the student received in the course for the reporting period used in the GPA calculation.</p> <p>Date of course completion is not used in determining which mark to use. Rule provided as follows:</p> <ol style="list-style-type: none"> <li>1) Takes highest final blended mark</li> <li>2) If (1) is not available takes the highest school mark regardless of when the course was taken (uses final mark for completed courses and current mark for courses in progress).</li> <li>3) If there is no final mark recorded and the record is a course request or a current course then assumes the student will pass for purposes of the verification</li> </ol>

<b>Field Name</b>	<b>Description</b>
	When the mark used in the calculation was the final mark, an “(F)” displays beside the mark; when the blended final mark is used in the calculation, a “(B)” will display beside the mark.
Weight	Displays the weight used in the GPA calculation for the displayed course. The Weight column is for the extra GPA points used in calculating the GPA for the course. If extra points are not used in the calculation (ie, it is an unweighted GPA), this column display “N/A”.
Calculated GPA	The calculated GPA is one of two columns for the GPA of each individual course used in the GPA calculation. There is one column to show the unweighted GPA for the course and one column to show the weighted GPA for the course. Either the weighted or unweighted GPA column displays on the report, depending on the formula selected.
Reporting Period	The reporting period column is for displaying the reporting period of the course mark used in the GPA calculation. This is the period created for the course length corresponding to the displayed course when creating a school reporting date (on SCH102 – School Reporting Dates). The period name only displays if the course is in progress. If the course is completed, this column is blank.
GPA Sum	The GPA sum field totals the GPA of all the courses for a student for either the weighted GPA or unweighted GPA columns (depending on the formula selected).

## Appendix A: GPA Formula

$$\left\{ \sum_{marks}^{in\_table_y} \{ (mark\_grade\_point + extra\_gpa\_pt) \times credit\_value \times [ credit\_value\_multiplier \times weight ] \} \right\} = TQP_x$$

$$\left\{ \sum_{courses}^{in\_table_z} ( credit\_value \times [ credit\_value\_multiplier \times weight ] ) \right\} = TC_x$$

$$\frac{TQP_x}{TC_x} = GPA$$

where x is 1, 2, 3, or 4 and y and z are tables. They are related as shown in the following table

x	Description	y	z	credit_value_multiplier	weight
1	All Marks for all reporting cycles designated as GPA Mark and associated with the chosen school reporting date	STUDENT_MARKS	COURSES	read from COURSES table; = 1 if NULL	= 1
2	Final Marks for all reporting cycles before the chosen school reporting date	STUDENT_MARKS	COURSES	= 1	= 1
3	Final Marks for all records in student's credit history	CREDITS	CREDITS	= 1	= 1
4	Non-final Marks for all reporting cycles associated with the chosen school reporting date <b>AND</b> setup as an Alternate Final Mark	STUDENT_MARKS	COURSES	= 1	read from REPORT_CYCLE_S; = 1 if NULL

The four GPA options selected on the Run GPA form are calculated in the following way.

The Courses formula and the Credits formula follow on the next page.

Current Reporting Period (may include final marks from semester, 9-week or other courses that end on this reporting date)	$\text{GPA} = \frac{\text{TQP}_1}{\text{TC}_1}$
Final Marks Only - Current Year	$\text{GPA} = \frac{\text{TQP}_2}{\text{TC}_2}$
Final Marks Only - All Years	$\text{GPA} = \frac{\text{TQP}_2 + \text{TQP}_3}{\text{TC}_2 + \text{TC}_3}$
All Final Marks + Courses in Progress (This calculates the infamous 7 <sup>th</sup> semester GPA, although it can be run at any time <sup>1</sup> )	$\text{GPA} = \frac{\text{TQP}_2 + \text{TQP}_3 + \text{TQP}_4}{\text{TC}_2 + \text{TC}_3 + \text{TC}_4}$

Although the 4<sup>th</sup> GPA option can be run at any time, it uses only a single mark for each course in progress. It is ideally suited, therefore, to be run after the first nine weeks, the first semester, or at any other time when the students' marks will represent their cumulative efforts for the year. This GPA is not generally suited to be run for the third nine weeks as this mark usually represents the third 25% of the course (rather than a 75% milestone). However, the school could create an additional reporting period for the 3<sup>rd</sup> nine weeks and give every student a mark that represents a true cumulative effort for the first three-quarters of the course (2/3-semester mark and 1/3 third-nine-weeks mark). This reporting period would then be designated as the GPA Mark (alternate final mark) for the school reporting date that marks the end of the third nine weeks.

➤ \_\_\_\_\_

1

## Courses and Credits Formula

Determine which one is appropriate to use in any given situation. However, based on the GPA type selected on SCH104 (Review GPA Calculation), the formula is selected and protected from change if appropriate (eg, if the GPA type selected indicated to use the top 8 courses in the calculation, then the courses GPA formula would be highlighted and used in the calculation and you would not have the option to change it to a different formula. If the None radio button is selected on the Students tab of the SCH103, users can choose any formula to run on SCH104).

A numeric average is also calculated based on the GPA formula selected, but based on the numerical mark rather than on the points. It would be treated similarly without the conversion to points (to use in ranking).

Example:

course code	credits	course mark	GPA points
ART	2	A (98%)	4
ENGLISH	4	C (60%)	2
CALCULUS	4	B (80%)	3
BAND	2	A (95%)	4

GPA using formula 1:  $((4*2) + (2*4) + (3*4) + (4*2)) / 12 = 3.0$

GPA using formula 2:  $(4 + 2 + 3 + 4) / 4 = 3.25$

numeric average using credit weighting:

$((98*2) + (60*4) + (80*4) + (95*2)) / 12 = 78.83\%$

numeric average without credit weighting:

$(98 + 60 + 80 + 95) / 4 = 83.25\%$

- Based on GPA type, reporting date, and formula selected, the system calculates GPA as well as the numerical average.
- In the field, the formula is written out – ie, (sum of points x credits for each course) / total credits ...etc
- If the courses GPA formula is selected, the system also calculates the unweighted numerical average; if the credits GPA formula is selected, the system also calculates the weighted numerical average
- Defaults the GPA formula based on what is selected in the 'Choose the GPA Type for this calculation' field (depending on what rules are defined in the type selected – ie, if courses selected on Students tab of SCH103, the courses GPA formula cannot be changed; if credits selected, if None selected, no formula is defaulted.)