

winMarks (1.0.2)

For the latest news regarding winMarks consult the URL

http://www.chembio.uoguelph.ca/winmarks_project

Getting Started

WinMarks Overview.....	2
Creating a New Course	3
Managing Columns and Fields	5
Importing Student Information.....	8
Editing Student Information	9
Calculated Fields.....	10
Exporting/Printing Student Information.....	12
Sorting and Filtering Column Data	16
Promoting Borderline Marks	18
Reporting Outstanding Pass/Pass/Fail	19
Histogram Analysis	20

NOTE: When you open a course database, winMarks makes a backup copy with the extension .bak. If you should inadvertently do something terribly wrong, use the File, Revert command to restore the class database from the backup.

WinMarks Overview

winMarks was originally conceived within the Department of Chemistry and Biochemistry as a solution to perceived problems with how Colleague would deliver class lists. Originally, Colleague class lists were to contain student information for one lecture section/seminar section combination. In our Department this implied that class lists for large classes might arrive in 200 discrete files.

Also, the venerable DOS program PC Marks was viewed as having served its purpose and a MS Windows replacement was sought. Finding someone to update PC Marks seemed unlikely as the original author no longer worked on campus.

In meetings with representatives from the Registrar's Office, Computing and Communications Services, Teaching Support Services, and several academic Departments on campus, it was decided to broaden the scope of winMarks so that anyone on campus could use it and, hopefully, find it useful.

Since the original conception, things have evolved. The Colleague class lists are, for now, available in one long file (or various other forms) so one reason for creating winMarks has disappeared. Nonetheless, I hope that people will still find winMarks useful.

Uwe Oehler (the author)
Department of Chemistry and Biochemistry

Creating a New Course

Choose FILE, NEW COURSE to create a database for a course. You will be prompted to choose a location and file name for the database. The file name extension will by default be .MDB (Microsoft Database). These files can be opened, repaired and compacted by Microsoft Access should the need ever arise.

Next, you will be shown the "Course Properties" Dialog Box. Leave the **Course Number and Semester fields blank** as these will be read in the proper format from the Colleague class list. Enter only the Course Title, Coordinator/Instructor.

Under **Course Options** you should choose how missing marks will be treated. If you choose **Zeros (0)** then any missing (blank) marks will be treated like a zero. If you choose the second option **Exemptions**, then equations will, if possible, scale existing marks upwards to compensate for the missing grade.

For example, consider a course with four quizzes each out of 10. The column "Avg" is a weighted average of the four columns with equal weighting. The column "Best3" chooses the best three marks and averages them with equal weighting.

Q1	Q2	Q3	Q4	Avg	Best3
----	----	----	----	-----	-------

"Treat missing marks as zero"

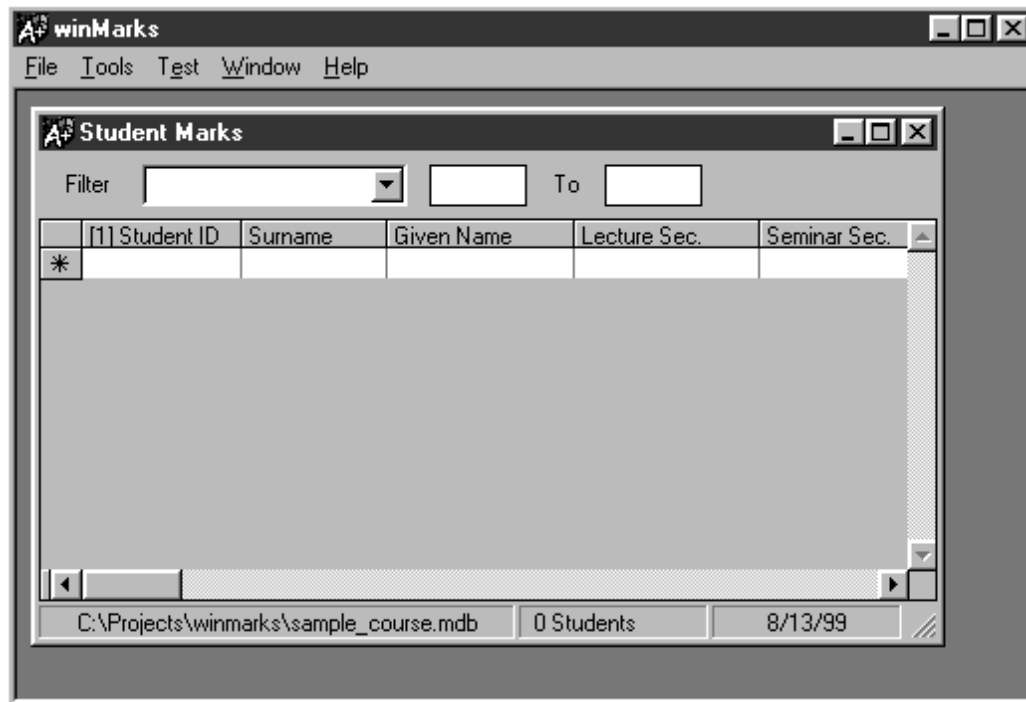
10.00	10.00	10.00	10.00	100.00	100.00
10.00	10.00	10.00	---	75.00	100.00
10.00	10.00	---	---	50.00	66.67
10.00	---	---	---	25.00	33.33
---	---	---	---	0.00	0.00

"Treat missing marks as exemptions"

10.00	10.00	10.00	10.00	100.00	100.00
10.00	10.00	10.00	---	100.00	100.00
10.00	10.00	---	---	100.00	100.00
10.00	---	---	---	100.00	100.00
---	---	---	---	0.00	0.00

Building the database takes a few moments. By default, winMarks creates a standard set of fields. These can not be deleted although you can re-title them, and you can alter the equation for the Final Grade column and also enable direct editing of the Final Grade.

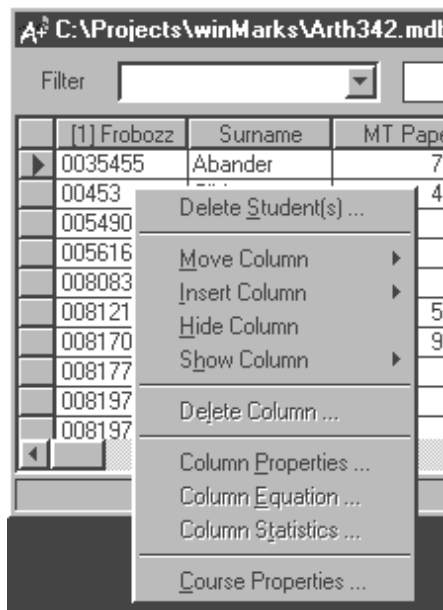
Fields that you add to the database to hold marks, calculations, and other information can be deleted as well as having some of their properties altered.



Managing Columns and Fields

By default, winMarks creates a standard set of fields in the course database. These fields hold the information required by the Registrar's office as well as information needed by those intending to use the WebCT gradebook. These fields cannot be deleted.

WinMarks displays the fields as columns within a spreadsheet. You can manage many aspects of the columns as well as the underlying fields by using the right mouse button.



NOTE: If the right mouse button does not display a menu, left-click someplace in the grid first.

Move Column

This alters the location in which the database field displays within the spreadsheet. You can choose to move the display location one column left or right, to the far left, or to the far right of the spreadsheet.

Insert Column

This inserts a new field into the database and set's the field's display position either to the left or right of the column over which you invoked the popup menu. A Dialog Box appears from which you can choose the characteristics of the new field.

A new column can hold either a Mark, a number, or some text.

For Marks, you must specify what the **Mark is Out of**. This value is used during calculations to determine a percentage grade. You are allowed, however, to enter marks higher than this value, or even negative values if this has meaning in your case.

If you specify the field as being **calculated**, you are allowed to enter an equation via the popup menu. You are prohibited from typing in a calculated field, however, as anything you type would disappear the next time you recalculated the spreadsheet.

Student Field Properties

Name:

Type:

Mark Out of:

Mark Options:

- Course is INComplete without this work.
- This field contains a bonus mark.
- This field is calculated.

OK

Cancel

For a Mark field, you can specify that a missing value in this column constitutes an **incomplete** in the course. This overrides the **Treat Missing Marks as Exemptions** flag which can be specified in the course properties.

You can also specify a Mark as being a **Bonus** mark. When calculating weighted averages, you can select a **Bonus** field as part of the calculation. Numbers in the **Bonus** field are added directly to the calculated weighted average with NO SCALING.

For example, consider a course with two quizzes out of 20, a bonus field, and a calculated column which gives the quiz total.

Q1	Q2	Bonus	Total
15.00	14.00	---	72.50
15.00	14.00	0.00	72.50
15.00	14.00	1.00	73.50
15.00	14.00	-1.00	71.50

In the case of a text field, you will be asked how long the data can be. Once created, the length of a text field cannot be altered.

Hide Column

To prevent the display from getting cluttered, it is possible to hide columns that are not immediately necessary to have on the screen. Position the mouse over the column to hide before invoking the popup menu via the right mouse button.

Show Column

The menu item display a second level of menu on which are listed all the hidden fields. You can "Show" any hidden field simply by choosing it on this sub-menu. For convenience, there is also a "Show All" option.

Delete Column

Position the mouse over the field to delete before invoking the popup menu via the right mouse button. This option permanently removes the specified column from the database. You will be asked to verify the intended action.

Those fields initially created by winMarks cannot be deleted. The "Delete Column" option will

be grayed out for those fields.

Column Properties

Once created it is possible to change some aspects of the column, or underlying field. For all fields you can change the column title.

For Marks fields you can change the "Mark Out of" value, as well as whether the field is calculated, or whether its omission constitutes an incomplete.

Column Equation

This allows you to set the equation for a calculated field. The equation Dialog Box appears and allows you to visually specify one of several equations; Weighted Average, Best N of M Marks, Worst N of M Marks.

You must use the menu command **TOOLS, RECALCULATE** to update the calculated fields.

Column Statistics

This option gives you a few simple statistics on the marks in the selected column. Only non-blank marks are considered. The available statistics are:

Count
Minimum
Maximum
Mean
Variance
Average Deviation
Standard Deviation
Skew

negative skew means the marks distribution tails to the left, whereas positive skew means the distribution tails to the right.

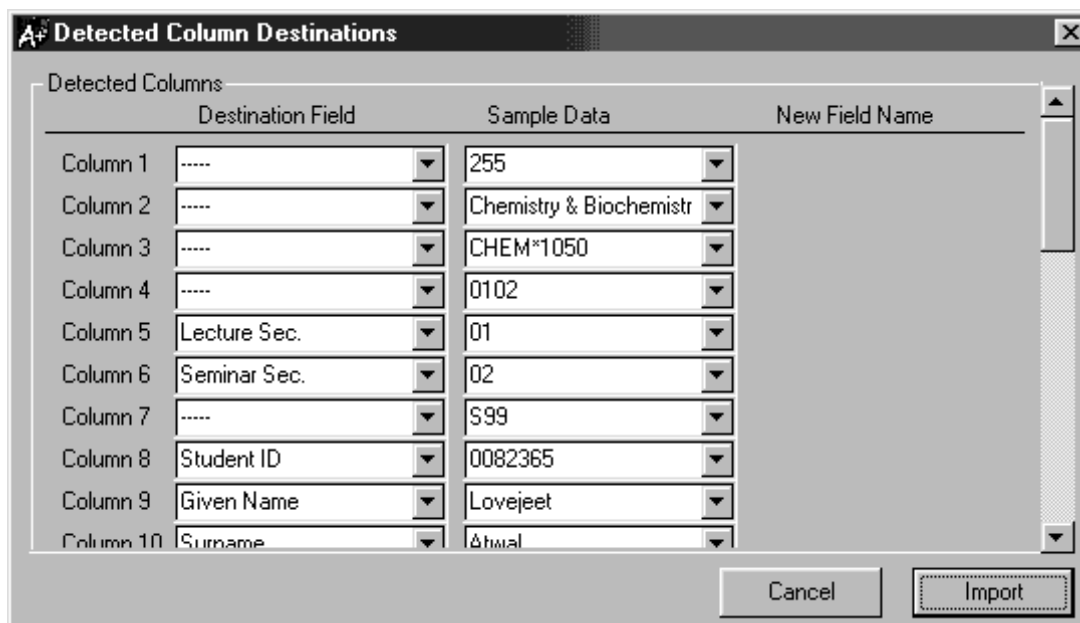
Kurtosis

negative kurtosis means that the marks distribution is peaked like the Matterhorn. A positive kurtosis implies a flat distribution like a mesa.

Importing Student Information

Student information typically comes from two main sources; Registrar class lists, and Test Score files. WinMarks has the ability to parse virtually any text file for which it has a .wmi import filter. If winMarks cannot parse a file you have, an import filter can probably easily be written. The one stipulation is that the file MUST contain student IDs. Although winMarks will attempt to match students by name in isolated cases, the file must contain one column designated as Student IDs.

If winMarks identifies the file's format, it will display a Dialog Box from which you can refine the field assignments. Each item of data found in the file can be either assigned to any existing field, assigned to a new field, or not imported. Several items of sample data taken from the file are displayed to help you identify what the column contains.



Once the assignments are made, the import process begins.

If the imported student ID is found in the database, import proceeds by overwriting data in the destination fields with data from the imported file. If the imported student ID is missing, winMarks will attempt to match by name but BOTH the surname and given name must match exactly.

If more than one imported student record has the same ID, the first will be taken as correct and the others will be written to the file "bad_record.txt" located in the winMarks directory. This file is overwritten with each successive import so it's contents should be acted on promptly.

If the imported student ID is NOT found in the database, a new student record is created.

After the import, an on-screen report tells how many student records were successfully found in the database, created in the database, and written to the "bad_record.txt" file.

Editing Student Information

The spreadsheet within winMarks acts very similarly to common spreadsheets we have all used. You can edit any cell (except for calculated field columns) by double clicking on it. After altering the data either press the Enter key to end the edit or use the arrow keys and/or the TAB key to navigate to the next cell.

To add a new student, scroll to the bottom of the sheet. Entering data into the row marked by the Asterisk (*) will create a new student record.

NOTE: Data is not written to the database until you click on, or move to, a ROW other than the one you just edited. This is especially important when adding new student records.

Calculated Fields

Mark fields can be designated as being calculated by modifying their Column Properties. A calculated field cannot be manually edited. Its value can only be altered by assigning it an equation and choosing the menu command TOOLS, RECALCULATE. All calculated fields are show as a mark out of 100.

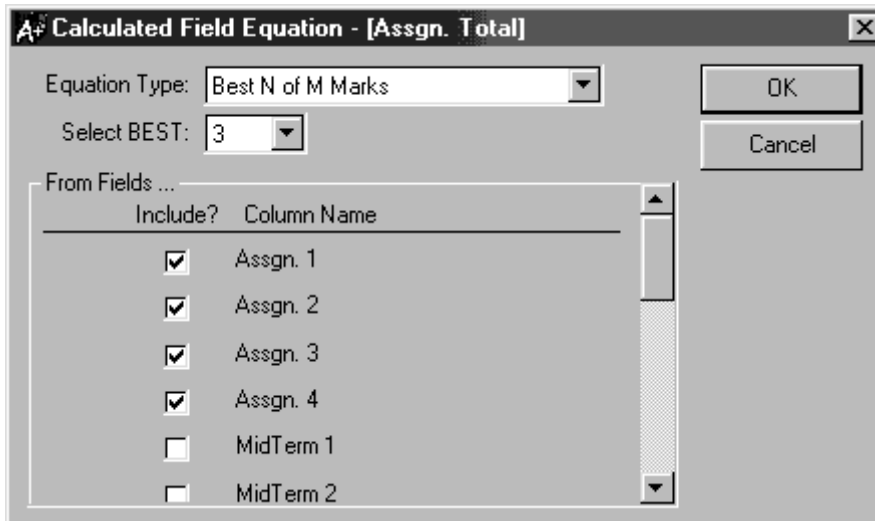
To enter an equation, position the mouse cursor over the column you wish to modify. If the underlying field is marked as calculated, the COLUMN EQUATION menu item will be enabled. Choosing this option will invoke the Column Equation Dialog Box.

WinMarks calculates the fields in such an order to ensure that fields are calculated before they are used in another column's calculation. In rare circumstances, a circular reference can occur. For example, imagine three calculated columns A,B, and C. A's value depends on B, and B's value depends on C. A circular reference arises if C's value depends on A. In this case there is NO order by which the values of the fields can be calculated since calculating any field requires that another be calculated first. In this circumstance, winMarks will report the situation, list the fields involved and stop the calculation.

Best/Worst N or M Marks

This particular equation chooses the Best or Worst N marks (scaled to be out of 100) out of M possibilities. Note that N must be less than M. The M fields are selected from a list of all possible candidates. N is chosen from a drop down box. The N chosen marks are averaged.

If some marks are blank and missing marks are being ignored, then this equation chooses from the remaining marks only. If N marks cannot be found, the equation uses the average of the remaining marks only.



Weight Average

The equation calculates a simple weighted average. The Marks to be averaged are selected from a list of all possible candidates. Beside each field is a column showing what percentage of the calculated Mark that field contributes. The sum of the contributions must add to 100.

Calculated Field Equation - [Total]

Equation Type:

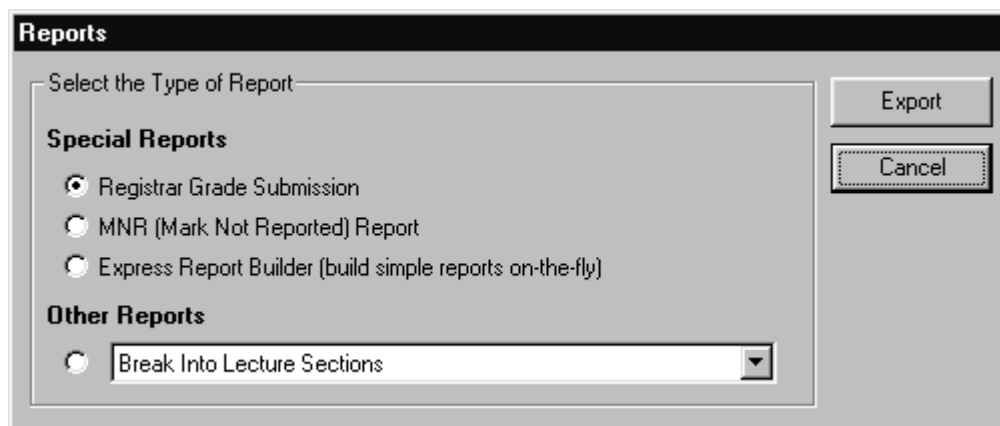
Weighted Average

Include?	% of Mark	Column Name
<input type="checkbox"/>	<input type="text"/>	Disc.Tot.
<input type="checkbox"/>	<input type="text"/>	Present'n
<input type="checkbox"/>	<input type="text"/>	HiRes
<input checked="" type="checkbox"/>	<input type="text" value="50"/>	Q1
<input checked="" type="checkbox"/>	<input type="text" value="50"/>	Q2
<input checked="" type="checkbox"/>	<input type="text" value="bonus"/>	Bonus

Should be 100

Exporting and Printing Student Information

The information in the course database can be exported via the FILE, SAVE REPORTS menu option. The following dialog box will appear.



Registrar Grade Submission

This writes a file that can be used to submit final grades to the registrar's office. The structure of the file is determined by the export filter **export_colleague.wme**. The file contains all the information included in the original class list plus an additional column for the final grade.

When you choose this option you will be prompted to type the name of the file to create. Type a new file name like CHEM0104.TXT or anything else that is meaningful to you.

MNR (Mark Not Received) Report

This option allows you to print MNR forms for students with a final grade of INC. In order to receive an INC, at least one column in your database that contributes to the final grade must be marked as **Course is INComplete without this mark** under the column properties.

Mark Not Received Report						
Course Information						
Course Number	CHEM*1040	Instructor	Oehler	Ext.	2128	<input type="button" value="Print"/>
Course Title	General Chemistry					<input type="button" value="Prev."/>
						<input type="button" value="Done"/>
						<input type="button" value="Next"/>
0070114 Bailey Jr, F., 01						
Student Work	Grade	Max Val.	Not Completed	Course Field	Max Val.	Date
Quiz1	4.25	5 %	<input checked="" type="checkbox"/> Final Exam	Final	40 %	1/03/99
MT1	7.20	10 %	<input type="checkbox"/> Assignment			
MT2	9.20	10 %	<input type="checkbox"/> Oral Exam			
			<input type="checkbox"/> Lab Exam			
			<input type="checkbox"/> Other	Lab	35 %	1/03/99
Completed Final Work	26.60	35 %	<input type="checkbox"/> No Record of Student		Should be 100	<input type="text" value="100"/>
Total	47	60 %				
Recommendation						
<input type="radio"/> A Final Numerical Grade of <input type="text" value="47"/> % <input type="radio"/> Credit Standing in the course <input checked="" type="radio"/> Deferred 2hr Exam in Registrar's Office <input type="radio"/> Deferred Condition by Instructor			Comments / Recommendations: (Optional) <div style="border: 1px solid black; height: 50px;"></div>			

The dialog is divided into three areas.

Course Information

Most of this information is taken from the Course Properties. You may need to complete some fields in this area like the phone extension. You only need to do this once. This same information is used for all MNR reports.

Student Information

When you invoke the MNR report you will need to select the marks that contribute to the student's final grade.

First, in the left side, choose the **non-final work** marks. These are marks that a student can miss earning and still get a grade in the course. After choosing a mark, fill in its contribution to the final grade in the box under "Max Value".

Second, in the right side, choose the **final work marks**. If a student is missing ANY of these grades they will receive an incomplete in the course. Again, assign a weighting to each mark. In total the weightings should add to 100.

You only need to do this one time. The same contributions and weightings are used for all MNR reports.

Recommendation

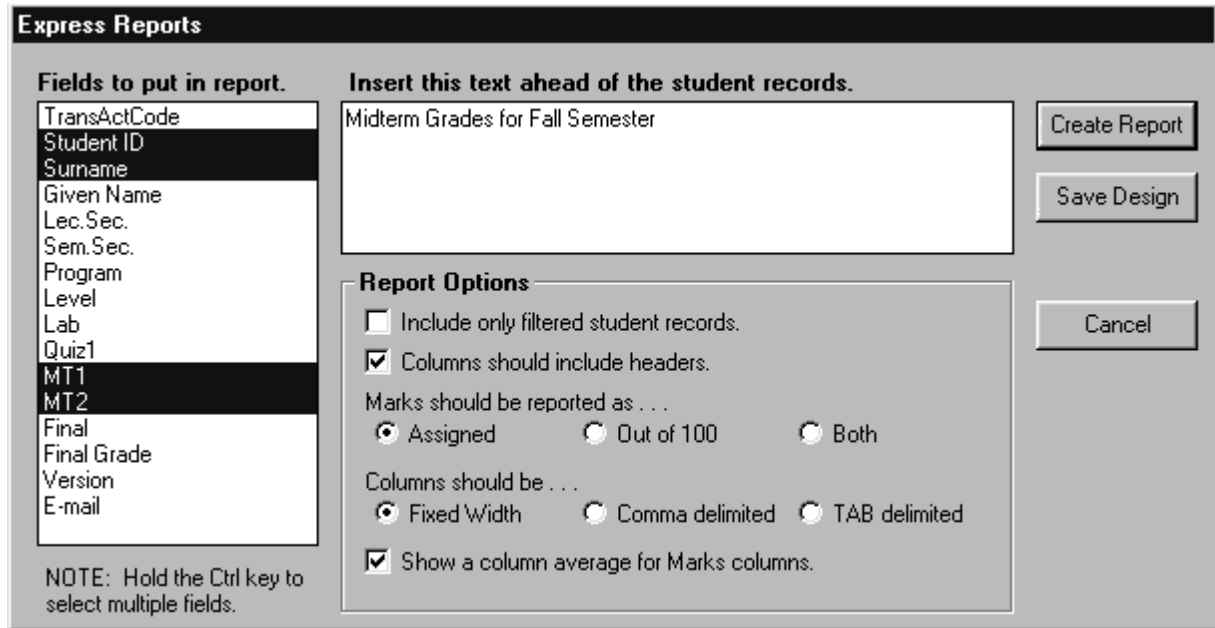
Finally, for each student you must choose one recommendation. winMarks calculates a

suggested Final Grade based on the work you selected in the Student Information section. You can edit this mark if you would like to assign another grade.

To print the form, press the **Print** button. If you need multiple copies, hit print once for each copy needed. Press **Next** to view the data for the next student with an INC or **Prev** to see the last student again. Only students with INC's will be displayed.

Express Report Builder

This feature allows you to generate simple reports with only a few mouse clicks. By choosing from simple options you can generate most common reports that one might require.



Express Reports

Fields to put in report.

- TransActCode
- Student ID
- Surname
- Given Name
- Lec. Sec.
- Sem. Sec.
- Program
- Level
- Lab
- Quiz1
- MT1
- MT2
- Final
- Final Grade
- Version
- E-mail

Insert this text ahead of the student records.

Midterm Grades for Fall Semester

Report Options

Include only filtered student records.

Columns should include headers.

Marks should be reported as . . .

Assigned Out of 100 Both

Columns should be . . .

Fixed Width Comma delimited TAB delimited

Show a column average for Marks columns.

NOTE: Hold the Ctrl key to select multiple fields.

Create Report

Save Design

Cancel

By default, student records in the report are ordered as they appear on the screen. Presort them before you invoke the Express Report Builder.

Select the fields that should be included in the report by clicking on the field name. Multiple fields can be selected by using Window's Ctrl-click and Shift-click features. Holding down the Control key and clicking allows you to select and deselect individual fields. If you click on one field and then shift-click on another, all the intermediate fields will be selected as well.

Next select which options you want.

[X] Include only filtered student records.

If checked and you are using a filter to limit the displayed students, only the visible subset of students will be reported. Otherwise, if unchecked, all students are reported.

[X] Columns should include headers.

If checked, each column has the name of the column above it. Otherwise the report start immediately with student data.

Marks should be reported as ...

(o) Assigned () Out of 100 () Both

If Assigned is chosen, 10 out of 20 will be reported as 10. If Out of 100 is chosen, 10 out of 20 will be reported as 50. If Both is selected, two columns will be created for each mark and 10 out of 20 would be reported as 10 and 50.

Columns should be ...

Fixed Width Comma delimited TAB delimited

If Fixed Width is chosen then Columns will line up nicely when printed using a fixed spacing font like courier. If you plan to import the data into another program or database then Comma delimited is a good choice. If you want to format the report using your word processor, then TAB delimited is the best choice.

Show a column average for Marks columns.

When checked, Marks columns show an average at the bottom of the column.

When you have specified the report you have two options. First, you can create the report. By default, winMarks creates a file called RPTemp.*** in your Window's temp directory and then opens the report in NotePad. You can either print from NotePad, or save the report to another file using NotePad's "File, Save" menu item.

Other Reports

winMarks is capable of creating reports which extend beyond the abilities of the Express Report Builder. These reports must be created in Report Designer, a task which is not for the faint of heart. Precreated reports appear in the drop down box in the Other Reports section. Also, if you save a design under Express Reports it will appear in this list as well.

When you choose a report from the list, winMarks will prompt you for a **Base Name** under which to save the report. Some reports can actually result in MANY files being created. Each file is saved using a variation of the **Base Name** as specified in the report definition. For example, if you selected a report that splits a class list into seminar sections and specified a base name of **section** you might get files named section01.txt, section05.txt, etc.

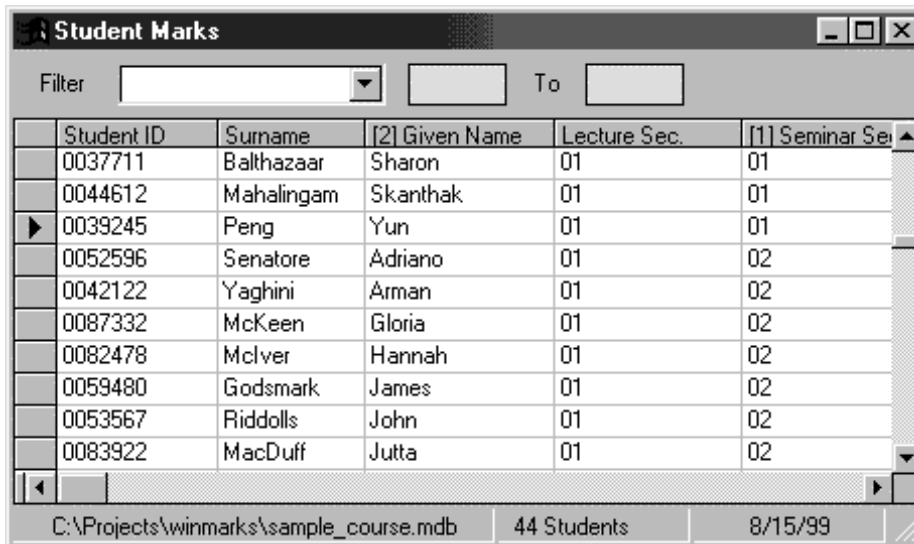
Because these reports can create more than one file, the resulting report is not automatically opened in notepad.

Sorting & Filtering Columns

Each column in the winMarks display has a header or title area. Left-clicking on this header with the mouse will cause the records to be sorted by the data in this column. A [1] will be prepended to the column title.

To sort by multiple columns, begin as above. Left-click on the major column to sort by. Next, hold down the Ctrl key and left-click on additional columns in the order by which they should be sorted. The columns will be numbered [1], [2], [3], etc. to denote their sort ranking.

In the example below, the records are first sorted by Seminar Section, and then by Surname.



The screenshot shows a window titled "Student Marks" with a filter box and a table of student records. The table has six columns: Student ID, Surname, [2] Given Name, Lecture Sec., [1] Seminar Sec., and an unlabeled column. The records are sorted by Seminar Section (01 and 02) and then by Surname within each section.

Student ID	Surname	[2] Given Name	Lecture Sec.	[1] Seminar Sec.	
0037711	Balthazaar	Sharon	01	01	
0044612	Mahalingam	Skanthak	01	01	
0039245	Peng	Yun	01	01	
0052596	Senatore	Adriano	01	02	
0042122	Yaghini	Arman	01	02	
0087332	McKeen	Gloria	01	02	
0082478	McIver	Hannah	01	02	
0059480	Godsmark	James	01	02	
0053567	Riddolls	John	01	02	
0083922	MacDuff	Jutta	01	02	

At the bottom of the window, the status bar shows: C:\Projects\winmarks\sample_course.mdb | 44 Students | 8/15/99

In addition to sorting data, you can also filter data, restricting the display to only that which is important at the moment.

First you choose the column from the dropdown box on which the records will be filtered. For example, Surname. Next you have two choices. If you enter text into only the first field, you will see only those records where, in our example, the surname starts with the specified letters. The student count updates to reflect the number of students matching the filter.

If you enter text in both the filter boxes, winMarks will display those records that lie between the groups of letters. For example, "ba" to "en". Names starting with the letters "ba" or above (alphabetical order) will display, as long as the first two letters are not "en" or above. In our example, "Babarosa" would display but "Enfield" would not.

Below you can see the results of filtering those surnames "a" and above and below "c".

Student Marks

Filter Surname a To c

Student ID	[1] Surname	Given Name	Lecture Sec.	Seminar Sec.
0082365	Atwal	Lovejeet	01	02
0037711	Balthazaar	Sharon	01	01
▶ 0088351	Basaraba	Natalie	01	02
0038910	Bawwab	Fadi	01	03
0088307	Biggs	Becca	01	01
0082239	Bottoms	Michael	01	01
0083169	Braun	Matthew	01	02
*				

C:\Projects\winmarks\sample_course.mdb 7 Students 8/15/99

Filtering for Text Containing the Filter Text

If you prefix the filter text with a "*" then the filter returns any text containing the specified sequence. Below you can see that the filter has returned only surnames containing "an".

Student Marks

Filter Surname *an To

Student ID	[1] Surname	Given Name	Lecture Sec.	Seminar Sec.
▶ 0040717	Hwang	Esther	01	03
0083268	Janson	Frederic	01	01
0041347	Stanlick	Jason	01	01
0039959	Tsang	Jason	01	03
*				

C:\Projects\winmarks\sample_course.mdb 4 Students 8/15/99

Promoting Borderline Marks

In the event that you want to avoid assigning borderline marks (say 49) that invite appeals, you can use the **Promote Borderline Marks** feature found under the **Marks** menu of winMarks.

You can set individual leniency around each decade from 50 through 90. You set the degree of leniency using the **Set Leniency Limits** menu command.

Tolerances		
Report Marks From		
90	to 90	as 90
79	to 80	as 80
69	to 70	as 70
59	to 60	as 60
47	to 50	as 50

These limits are on a per-course basis. These limits apply **ONLY** to the Final Grade calculation. You must use **Marks, Recalc** to see the effect.

Reporting Outstanding Pass/Pass/Fail

Some courses report non-numeric final grades. If you have maintained interim results as numeric grades, winMarks can translate these to F for fail, P for pass, and OP for outstanding pass based on thresholds that you can set. This assumes that the Final Grade is calculated. If the Final Grade column is NOT calculated you can still type in F, P or OP and these will be recognized.

To establish the thresholds, choose the menu item, **Marks, Set OP, P and F Thresholds**. In the dialog box that appears, you can enter two threshold values. In the example shown, marks from 90 to 100 inclusive will be shown as OP in the final grade column, marks from 50 to 89 inclusive will be shown as P, and marks from 0 to 49 will be shown as F.

After setting the threshold values choose, **Marks, Recalc** to update the Final Grade column. If you are using **Promote Borderline Grades**, the promotion occurs just prior to the conversion to F,P or OP.

Histogram Analysis

Histogram analysis can display, in either a graphic or tabular form, the distribution of grades within a class. Marks can be broken down according to the following schemes.

- A+,A,A-, B+,B,B-, C+,C,C-, D+,D,D-,F
- A,B,C,D,E,F
- 90 and above,80's,70's, 60's,50's,40's,30's,20's,10's,below 10
- Above/Below user supplied threshold mark

In addition, student marks can be clustered (grouped) according to several criteria allowing comparisons between the groups.

- Program + Major + Minor (e.g. BSCH.BIOS:H, BSCH.BIOS, BSCH.MBG-BIOC)
- Program + Major (e.g. BSCH.BIOS, BSCH.MBG, BSCH.MICR)
- Program (e.g. BSCH, BSCG, MSC)
- Lecture Section
- Seminar Section
- Semester Level

Finally, you can choose to use the raw counts, or show counts as a percentage of the cluster total. This later option is useful for comparing grade distributions between clusters that have disparate numbers of students.

Simple Grade Distribution A's, B's, C's, etc.
Comparing Students in Different Lecture Sections
Comparing Students in Different Semester Levels
Comparing Students in Different Programs