West Virginia University

Excel Coach Matching Operation Manual

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,

Engineering and Mineral Resources

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Gathering & Importing Raw Data into Excel

Gathering the Data

- 1. Reporting > Student Enrollments
- 2. Term
 - a. Select the current term first. Only use the current term for students; backtrack from the current term until no results are displayed for coaches. This will result in multiple exports for coaches.
- 3. Student Filters
 - a. Student Information
 - i. Paste all Student IDs (coaches XOR students); separated by spaces.
- 4. Search
- 5. Show/Hide Columns
 - a. "Student Name", "Student ID", "Major", "Course Number", "Dropped?"
- 6. Sort the results alphabetically (click the "Student Name" column header).
- 7. Export Results
 - a. Optionally name the CSV with a recognizable name, i.e. students.csv, coachF22.csv, coachSu22.csv, coachSp22.csv, etc.

Importing the Data

- 1. Open the Coach Matching Excel document
- 2. Open the downloaded export from Navigate (.csv file)
- 3. With the .csv file opened in Excel, and the .csv document having <u>focus</u>
 - a. To import student data press: CTRL + SHIFT + S
 - b. To import coach data press: CTRL + SHIFT + C

The Parts of the Document

"student"

- This <u>sheet</u> is comprised of the <u>static</u> student information
 - o Name, ID, and Major(s) is auto filled.
 - Hours is manually entered as the number of hours the student has signed up for per week/paid for.

"studentCourses"

- This <u>sheet</u> is comprised of some overlapping data from the "<u>student</u>" sheet, with the addition of the courses the student is taking.
- **Nothing** on this sheet is to be altered, except by the automatic import.

"coach"

- This <u>sheet</u> is comprised of the **static** coach information
- The same data as in "student" is located here, in addition to the "Hourly Wage" column.
 - Manual entry of hours requested to work a week and their hourly wage is the be entered here.

"coachCourses"

- This <u>sheet</u> is comprised of some overlapping data from the "<u>coach</u>" sheet, with the addition of the courses the coach is taking.
- **Nothing** on this sheet is to be altered, except by the automatic import.
- This sheet will be quite extensive, since we are looking at the cumulative list of courses the coaches have taken.

"prospectiveMatches"

- This <u>sheet</u> is comprised of the semi-raw data produced by the matching algorithm. This
 data is formatted for usability by the user for **reference** when matching. This data is used
 to fill the "<u>activeMatching</u>" sheet.
- **Nothing** on this sheet is to be altered, except by the matching algorithm.

"activeMatching"

- This <u>sheet</u> is where the magic takes place. This is where the matching will be done, and resources (student hours & coach hours) will be automatically updated to provide real-time accuracy of the current match state.
- The sheet is automatically filled by the matching algorithm based on the "prospectiveMatches" sheet.
- The **only** fields in which the user should edit include:
 - o Coach Name (Column C)
 - o Hours Allocated (Column D)
 - Hours Allocated is the number of hours the coach will be assigned to the respective student.

Buttons

Create Prospective Matches / Autofill This Sheet

This button will run the matching algorithm. It will fill (overwrite) the "prospectiveMatches" sheet, and will overwrite the "activeMatching" sheet. This button should realistically be used once unless changes have been made to the coaches/students and a new matching sequence needs to be generated.

Export Coach Information

This button will export the "activeMatching" sheet in terms of the coaches. It will prompt the user for the number of students to display for each coach, defaulting to 4 students per coach. This new sheet is named "coachExport"

Reset AutoUpdate

- This button will reset the program's ability to automatically update the "activeMatching" sheet when a cell is altered.
- This button should **not** need to be used, however the need may arise if the sheet is not automatically updating student/coach hours due to an error.

"coachExport"

- This <u>sheet</u> is the exported "activeMatching" sheet in terms of the coaches, instead of in terms of the students; created using the **Export Coach Information** button.
- This sheet will display each coach listed in the "activeMatching" sheet and their remaining hours, total hours assigned, wage, and estimated weekly salary. Additionally, this sheet will display each student the coach is assigned to, and how many hours they are assigned to the student.
- This sheet can be altered in any way needed or wanted, as the sheet is **not** used for anything other than user readability.
- This sheet **must** be renamed or deleted before another export can be created. Warning will occur.

How To "Actively Match"

- After importing all the student and coach information, the user can begin actively matching by using the **Create Prospective Matches / Autofill This Sheet** button.
- After filling the sheet, the user may alter the assigned coaches and their assigned hours in any way they please.
- Assigning hours to a respective coach will decrement their available hours everywhere
 else they are seen in this sheet as to provide a real-time view of the effects of each match
 and the change in available resources.
- Additionally, assigning hours to a coach will decrement the remaining hours of the respective student for similar reasons.
- If a coach or student is assigned too many hours (remaining hours go negative) a warning will appear stating which coach and/or student has received too many hours. The document will still function in this case, however the warnings will continue.
- Continue to fill the sheet until all students have their remaining hours fulfilled.
- Export the coach information using the Export Coach Information button for an alternate view.
- Note that the matching algorithm does its **best** to provide an effective **start point** to the matching process, and requires the user to interact with the program. Hence, the program is only partially automatic, in the sense that manual operation is also necessary.

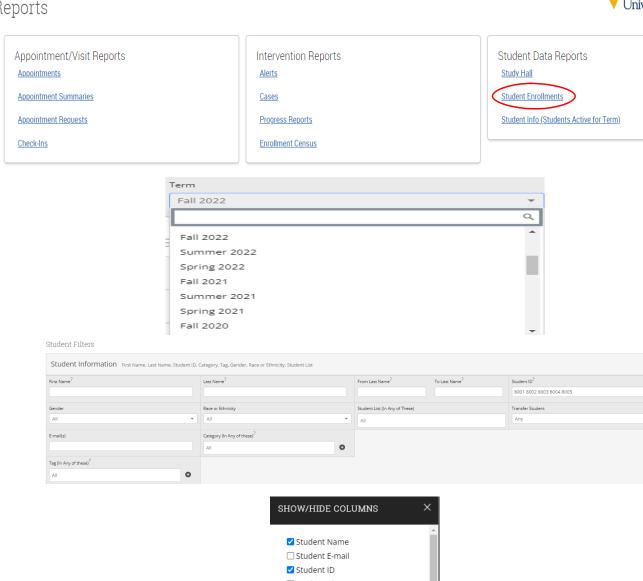
What To Avoid

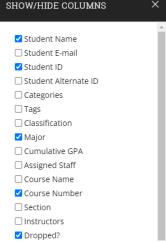
- Note: <u>Fatal Errors</u> should not occur. All errors should be handled and displayed appropriately.
- Avoid incorrect data entry
 - o Where a cell expects a number, only enter numbers
 - Hours and Wage (Wage can contain a decimal; do not enter a dollar sign)
 - O Where a cell expects a name, only enter valid names
 - Invalid names will result in a warning when exported, however will not result
 in an error. To ensure valid named are entered, copy and paste them from
 the "coach" sheet.
- Do **not** alter the Navigate Exports in any way. The import process accommodates for the exported header and starts data importation at the correct location.
- Do **not** share the document with others as the document includes protected information under **FERPA**. The document **can** be shared with others **only** if all personal information is removed, as seen in the example photos. The program does **not** include any protected information and this protected information lies solely in the excel sheets.
- Do not rename any of the sheets. The only exception to this is the "coachExport" sheet. This can be renamed, and should be renamed in instances where the user wants to save multiple versions of the coach export. "coachExport" is a reserved name, used by the program to export the information, and requires that sheet is deleted or renamed before another version can be exported.
- Do **not** delete **any** of the sheets. The only exception to this is the "<u>coachExport</u>" sheet, see above.

Reference Images

Reports







APPENDIX

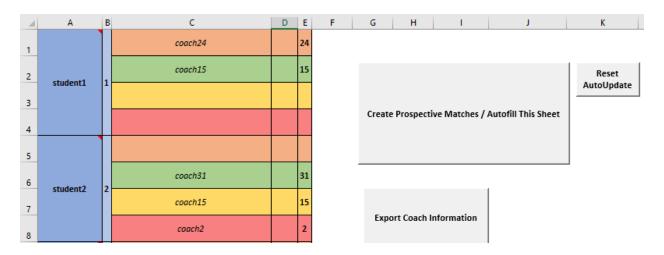
A	Α	В	C	D
1	Name	Student ID	Major(s)	Hours
2	student1	80000001	Criminology	1
3	student2	800000002	Marketing	2
4	student3	800000003	Mechanical Engineering	3
5	student4	800000004	Multidisciplinary Studies/BMdS	4
6	student5	800000005	Industrial Engineering	5
7	student6	800000006	Business	6

4	А	В	C	D	Е
1	Name	Student ID	Major(s)	Hours	Hourly Wage
2	coach1	810000001	Biochemistry	1	\$9.75
3	coach2	810000002	Aerospace Engineering, Mechanical Engineering	2	\$10.00
4	coach3	810000003	Petroleum & Natural Gas Engr	3	\$10.25
5	coach4	810000004	Biochemistry	4	\$10.50
6	coach5	810000005	Animal & Nutritional Sciences, Biology	5	\$10.75
7	coach6	810000006	Management Information Systems	6	\$11.00

4	А	В	С
1	Name	Student ID	Courses ->
2	student1	80000001	MDS-289
3	student2	800000002	MATH-104
4	student3	800000003	ENGL-102
5	student4	800000004	GERO-212
6	student5	80000005	IENG-350
7	student6	800000006	MATH-104

4	А	В	С
1	Name	Student ID	Courses ->
2	coach1	810000001	BIOL-423
3	coach2	810000002	MAE-454
4	coach3	810000003	IENG-213
5	coach4	810000004	PSYC-345
6	coach5	810000005	BIOL-338
7	coach6	810000006	BCOR-330

	A	В	С	D	E	F	G	Н
1	Student Name	Major Match	Course Match #1	Courses	Course Match #2	Courses	Course Match #3	Courses
2	student1	coach24	coach15	HIST-203				
3	student2		coach31	ECON-202,ECON-225,MATH-124,ENGL-101	coach15	ECON-225,ECON-202,MATH-124	coach2	ECON-202,ENGL-101
4	student3	coach2 coach30	coach2	ENGL-102,PHYS-112,MAE-211,MAE-241	coach3	ENGL-102,PHYS-112,MAE-241	coach30	MAE-211,PHYS-112,MAE-241
5	student4		coach12	LDR-301,WGST-150	coach8	WGST-150	coach9	WGST-150
6	student5	coach20	coach20	IENG-350,IENG-301,IENG-305				
7	student6		coach6	BCOR-191,BCOR-199,BCOR-121	coach7	COMM-104,BCOR-199,MATH-124	coach15	MATH-124,BCOR-191,BCOR-199



	Α	В	С	D	E	F	G
1	Coach Name	Remaining Hours	Student Name	Student Name	Student Name	Student Name	Hourly Wage
2	Coacii Name	Assigned Hours	Hours Assigned	Hours Assigned	Hours Assigned	Hours Assigned	Weekly Wage
37	coach28	28	student31				\$16.50
38	COACHZO	0	0				\$0.00
39)	3	student3	student11	student18	student23	\$10.25
40	coach3	0	0	0	0	0	\$0.00
41	coach30	30	student3	student12	student31	student38	\$17.00
42	COachso	0	0	0	0	0	\$0.00
43	coach31	31	student2	student14	student16	student19	\$17.25
44	COachSI	0	0	0	0	0	\$0.00