Grading scheme: Particle Physics II ()

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The final grade of the Particle Physics 2 course is calculated as the average between the CP and the QCD parts. In order to pass the course the total grade needs to be larger than 5.5 e.g. if the average results into 5.49 your score will be downgraded to 5 and you will not pass, if it is 5.5 then it will be rounded up to 6 and you have succeeded.

For each individual part, you have the possibility to get maximum two extra bonus points by doing well with the homework assignments. The way to profit from the scheme is given below. However, it needs to be pointed out that you can take advantage of this bonus only if your grade for each individual exam (e.g. only the QCD exam for what concerns the QCD homework) is larger than 5.5.

If your QCD exam grade is larger than 5.5 then the grade of the QCD part (similarly for the CP part) is calculated as the maximum between the exam and the weighted average of the final exam and the weekly exercises. The relevant weight is 85 : 15 i.e. 85% of the grade comes from the final exam and 15% from the sum of the hand-in exercises. The formula based on which the grade of each individual part (i.e. here for QCD) is calculated is:

$$\text{grade} = max\left(\left[0.85\cdot(\text{exam}) + 0.15\cdot\frac{1}{N}\sum_{i=1}^{N}(\text{homework})_i\right], \left[\text{exam}\right]\right)$$

where (exam) is the grade of the final exam, $(\text{homework})_i$ is the grade of each individual hand-in exercise set, and N is the total number of exercise sets you have to hand in. Please note that no matter if you handed in exercises one time or as many times as the number of lectures, the average of the grade related to the exercises will be computed over the total number of lectures (i.e. you should hand-in as many sets as the number of lectures to take advantage of the grading scheme).

If the grade of the QCD exam is lower than 5.5 then this reflects also the final QCD grade (similarly for the CP part).

If you fail the course then there is a retake exam which is announced well in advance to all students. You can participate in this retake exam even if you have succeeded in the initial attempt. However, this last grade of the retake exam will be considered in the final grade evaluation regardless of the score. The final QCD grade is calculated in an identical way as described before by replacing the grade of the exam with the grade of the retake.

After each lecture (with obviously the exception of the first one), you may hand-in the solution to the assigned homework exercises. The points are granted based on the correctness of the solution of each exercise. The value of each exercise is indicated clearly (i.e. the number under the square brackets). The final exercise sheet, may handed in before the final exam.

The exam is 'open book' so that you may consult the lecture notes and the books of Griffiths, Halzen & Martin and Aitchison & Hey, but not the worked-out exercises or any other material.

Some examples:

Example A: A student has a homework average of 9.5 in QCD. The same student scores 7.0 in the final exam. The final QCD grade is then the maximum between the grade of the exam (i.e. 7.0) and the weighted average between the exam and the homework i.e. $0.85\cdot 7.0 + 0.15\cdot 9.5 = 7.375 \rightarrow 7.4$. So in this case the final QCD grade will be 7.4.

Example B: A student has a homework average of 6.0 in QCD. The same student scores 8.7 in the final exam. The final QCD grade is then the maximum between the grade of the exam (i.e. 8.7) and the weighted average between the exam and the homework i.e. $0.85\cdot 8.7 + 0.15\cdot 6.0 = 8.295 \rightarrow 8.3$. So in this case the final QCD grade will be 8.7.

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Example C: A student has a homework average of 9.5 in QCD. The same student scores 4.9 in the final exam. Note that the student in this case does not have the possibility to profit from his homework score, which would have raised the QCD grade $0.85 \cdot 4.9 + 0.15 \cdot 9.5 = 5.59 \rightarrow 5.6$. So in this case the final QCD grade will be the grade of the exam i.e. 4.9.