Table 1. General recommendation based on the score achieved by the student

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Score | Time period | Status | Alert | Recommendation |
| 5 | In the first month | It has reached 5%. | Academic risk | Possible desertion |
| 10 | In the first month | It has reached 10% | Academic risk | Possible desertion |
| 15 | In the first month | It has reached 15% | Academic risk | Possible desertion |
| 20 | In the second month | It has reached 20% | Between 10% and 20% of the course is not achieved | Develop a remedial plan |
| 25 | In the second month | It has reached 25% | Between 10% and 25% of the course is not achieved | Develop a remedial plan |
| 30 | In the second month | It has reached 30% | Between 10% and 30% of the course is not achieved | Develop a remedial plan |
| 40 | In the third month | It has reached 40% | Between 10% and 40% of the course is not achieved | Develop a remedial plan |
| 50 | In the third month | It has reached 50% | Between 10% and 50% of the course is not achieved | Develop a remedial plan |
| 60 | Between the fourth and fifth month | It has reached 60% | Between 10% and 60% of the course is not achieved | Develop a remedial plan |
| 70 | Between the fourth and fifth month | It has reached 70% | Approved | Nothing new |
| 80 | Between the fourth and fifth month | It has reached 80% | Approved | Nothing new |
| 90 | In the sixth month | It has reached 90% | Approved | Nothing new |
| 100 | In the sixth month | It has reached 100% | Approved | Nothing new |
| ≤19 | In the sixth month | Failed with less than 20 grade points | Academic risk | Possible dropout |
| ≤69 | In the sixth month | Improvement between 20 and 69 score points | Academic risk | Develop a remedial plan |
| ≤80 | In the sixth month | Passed | Approved | Nothing new |
| ≤90 | In the sixth month | Passed with good performance | Approved | Nothing new |
| ≤100 | In the sixth month | Passed with distinction. | Approved | Nothing new |

Table 2. Recommendations for the professor in the first part of the course.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Score | Recommendation | Professor | Message to the Professor | Students | Message to Students |
| 5 | Possible desertion | Risk alert | Be sure to provide specific feedback that helps the student understand how to improve. | Ask the professor for assistance. | Remember that every mistake is an opportunity to learn and grow. |
| 10 | Possible desertion | Risk alert | Review the details of the students’ performance to identify areas where they may need more support. | Ask the professor for assistance. | A positive attitude and constant effort will take you far; keep moving forward. |
| 15 | Possible desertion | Risk alert | Consider how your message can inspire the student to overcome challenges and maintain a positive attitude. | Ask the professor for assistance. | Do not give up and overcome obstacles and difficulties. |
| 20 | Develop a remedial plan | Motivation for the course | Assess whether the student needs additional strategies to strengthen their skills and achieve their goals; consult with your colleagues. | Improve your performance. | Your commitment and effort are admirable; keep up the pace and keep it up. |
| 25 | Develop a remedial plan | Motivation for the course | Provide specific examples of how the student can apply a positive attitude to improve in specific areas. | Improve your performance. | Every small achievement is a step towards total success; keep up the good work with every advance. |
| 30 | Develop a remedial plan | Motivation for the course | Maintain an open dialogue so that the students feel comfortable sharing their difficulties and achievements. | Improve your performance. | Perseverance is key; keep working and you will achieve your goals. |
| 40 | Develop a remedial plan | Motivation for the course | Ensure that your support is personalised and tailored to the individual needs and strengths of the student. | Improve your performance. | Trust in your ability; you are closer to achieving your goals than you think. |
| 50 | Develop a remedial plan | Extrinsic motivation | Allow time for the presentation of medals to those with high averages and motivational letters to encourage others to strive for excellence as well. | Improve your performance. | The effort you put in today will be reflected in your achievements tomorrow. |

Table 3. Recommendations for the professor in the second part of the course.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Score | Recommendation | Professor | Message to the Professor | Students | Message to Students |
| 60 | Develop a remedial plan | Course alert | Analyse the student's progress and adjust your motivation strategies according to the results obtained. | Overcome difficulties that affect your performance. | You can overcome any challenge; stay focused and you will see the results. |
| 70 | Nothing new | Change feedback | Offer additional resources or suggestions to help the student improve in areas where they are experiencing difficulties. | Get the highest score now. | Every step you take is a step towards success; don't stop now. |
| 80 | Nothing new | Motivation to achieve higher scores | Review your communication to ensure that your message is encouraging and constructive, fostering a positive environment for learning. | Get the highest score now. | Your dedication is making a difference; keep going and you will see results. |
| 90 | Nothing new | Motivation to achieve higher scores | Ensure that your feedback not only recognises achievements but also offers a clear path for improvement in weaker areas. | Get the highest score now. | You have achieved your performance goal; now it's time to improve your final score. |
| 100 | Nothing new | Motivation to achieve higher scores | Observe whether there are patterns in the student's performance and adjust your support strategies to address any recurring trends. | Good performance | Celebrate this achievement, which makes us all proud, with your family and classmates, and thank you for achieving it. |

Table 4. Recommendations by rank for composition focused on the professor.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Grade range | Recommendation | Professor | Message to the Professor | Students | Message to Students |
| ≤19 | Possible desertion. | Possible dropout. | Consult with other professors about working together to identify areas where the course content could be improved. | Opportunity to overcome this with determination and effort. | Do not let this challenge define your ability; every setback is an opportunity to learn and grow. |
| ≤69 | Develop a remedial plan. | Motivation to achieve higher scores | Carefully analyse the areas in which the student is experiencing difficulties and design a specific remedial plan that includes clear objectives, additional resources, and personalised support strategies. | Opportunity to overcome this with determination and effort. | Do not view this challenge as a failure, but rather as an opportunity to redirect your efforts and learn more effectively. |
| ≤80 | Nothing new | Motivation to achieve higher scores | Ensure that you include follow-up sessions to assess progress and adjust the plan as necessary. | Now aim for the highest score possible. | Take advantage of this time to strengthen your skills and remember that every effort counts. |
| ≤90 | Nothing new | Motivation to achieve higher scores | Maintain the idea of providing structured guidance that allows students to improve gradually and maintain confidence. | Now aim for the highest score possible. | Now is an opportunity to redirect your efforts and learn more effectively. |
| ≤100 | Nothing new | Nothing new | Offer incentives to achieve good performance and avoid getting a minimum score, encourage them to make an effort and achieve as much as possible. | Now aim for the highest score possible. | You have overcome obstacles along the way, and what matters is how we respond to them. |

Table 5. Kaiser-Meyer-Olkin contrast.

|  |  |
| --- | --- |
| KMO | 0.833 |

Table 6. Codes and response options for each question in the survey.

|  |  |  |
| --- | --- | --- |
| Question | Code | Answer options |
| Q1 | 1. | Male |
|  | 2. | Female |
|  | 3. | Other |
| Q2 | 1. | Less than 18 |
|  | 2. | 18–19 |
|  | 3. | 20–21 |
|  | 4. | 22–23 |
|  | 5. | Greater than or equal to 24 |
| Q3 to Q9 | 1. | Completely disagree |
|  | 2. | Disagree |
|  | 3. | Neither agree nor disagree |
|  | 4. | Agree |
|  | 5. | Completely agree |

Table 7. Factor loads student survey (Structure Matrix).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Question | F1 | F2 | F3 | Variable | Dimension |
| Q3 |  | 0.58 |  | Clarity and access to activity resources | Autonomy |
| Q4 | 0.79 |  |  | Perceived preparation prior to the activity | Competence |
| Q5 |  | 0.64 |  | Compliance with prior preparations | Autonomy |
| Q6 | 0.81 |  |  | Seamless development of the activity | Competence |
| Q7 |  |  | 0.71 | Professor follow-up and support | Relationship with the professor |
| Q8 |  |  | 0.42 | Impact of feedback on the professor-student relationship | Relationship with the professor |
| Q9 | 0.83 |  |  | Confidence in one's own abilities for future activities | Competence |

Table 8. Description of the questions used in collecting information.

|  |  |
| --- | --- |
| Question | Description |
| Q1 | Indicate your gender: [Female – Male – Other] |
| Q2 | Which of the following age ranges do you fall into? |
| [Less than 18, 18–19, 20–21, 22–23, Greater than or equal to 24] |
| Q3 | How much do you agree with the statement that accessing the task instructions document (or its rubric) has not been difficult? |
| Q4 | How much do you agree that you felt prepared before carrying out the activity? |
| Q5 | How satisfied are you with having completed all the pre-activity instructions, readings, review of examples, etc.? |
| Q6 | How much do you agree that the activity has proceeded normally? |
| Q7 | How much do you agree that your professor provided support and motivation while you were carrying out the activity? |
| Q8 | How much do you agree with the motivation behind feedback? |
| Q9 | How much do you agree with feeling motivated to do the following activity? |

Table 9. Survey of professors of the subject of Programming in regular classrooms (2025).

|  |  |
| --- | --- |
| Open questions | |
| Question | **Description** |
| Q1 | What was your first impression when you found the classroom for your subject with preloaded resources and activities? |
| Q2 | Has it been useful to have resources for a subject you teach? |
| Q3 | What can you tell us about the time you spend creating content (when you are given a new subject) compared to a delivered base content? |
| Q4 | Have you had time for other teaching management activities in the cloned subject? |
| Q5 | What could you improve about the design of the classroom you have been assigned to this semester? |
| Q6 | Can you tell us something specific that has been useful as a professor and that you can apply for another non-pilot course? |
| Closing Questions | |
| Question | **Description** |
| Q1 | How often do you have one or more new subjects each semester? |
|  | [Very frequently – Frequently – Occasionally – Infrequently – Not at all] |
| Q2 | Were you satisfied with having initial material to teach the subject? |
|  | [Very satisfied – Satisfied – Neither satisfied nor dissatisfied – Dissatisfied – Very dissatisfied] |
| Q3 | Did you participate in the classroom training at the beginning of the semester? |
|  | [Yes – No – Other (at the start of the period, you were assigned a course)] |
| Q4 | Do you agree that having a common core curriculum allows students to benefit from the same content, receive materials from the professor at the same time, and avoid delays in learning plans? |
|  | [Strongly agree – Somewhat agree – Neither agree nor disagree – Disagree – Strongly disagree] |
| Q5 | How important do you think it is that all of them have a certain amount of resources and basic/common activities so that there are no marked differences during the learning processes between the different courses? |
|  | [Very important – Important – Moderately important – Of little importance – Unimportant] |
| Q6 | Do you give group or individualized feedback? |
|  | [Group feedback – Individualized feedback – I use both, group and individualized] |
| Q7 | Have the recommendations provided for adapting changes to the course based on students' grades been useful in helping them improve their performance? |
|  | [Not useful – Not very useful – Moderately useful – Very useful – Extremely useful] |
| Q8 | Regarding the support provided among professors as a method of recommendations for adapting course content based on students' grades? |
|  | [Not useful – Not very useful – Moderately useful – Very useful – Extremely useful] |