Regulations for Internships

Faculty of Medicine VU Amsterdam
Master Oncology
2023-2024

Index

1 Introduction

The Minor and Major internships are both an important part of the Master program. Each internship involves many different aspects and skills of scientific research, such as literature survey, theoretical experiment preparation, practical execution, report writing, oral presentation, and participation in the scientific activities of a research department. The regulations outlined below describe, in chronological order, the process of completing an internship. The various stages of the process will be supported by forms provided on: Master Oncology and Master Personalized Medicine - Vrije Universiteit Amsterdam (vu.nl) . The student is responsible for finding a suitable place for each internship, finding an Amsterdam UMC assessor and for the timely completion of all forms (including signatures).

Required forms

- Digital approval form:
  https://fd20.formdesk.com/vuamsterdam/Approvalform_minor_major_ScienceMasters
- Internship Portfolio consisting of:
  - List of Agreements (A)
  - Research Proposal (B)
- Digital interim Assessment form:
  https://fd20.formdesk.com/vuamsterdam/Interim_Assessment_Internship
- Digital assessment form:
  https://fd20.formdesk.com/vuamsterdam/Assessment_form_internships_ScienceMasters

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2 General information

2.1 Length and credits

The Master's programs include two separate internships, together accounting for 66 ECTS (European Credit Transfer System). Standard: 1 week accounts for 1,5 ECTS (office hours: 8 hours per day, e.g. 09.00 - 17.30 including one half hour-break). The Minor internship accounts for 30 ECTS (20 weeks).
The Major internship accounts for 36 ECTS (24 weeks). An internship can be longer than 24 weeks, extra credits cannot be obtained. To obtain the credits, the Internship Portfolio has to be successfully completed and graded (the practical work, the presentation as well as the report) within 3 months after finishing the practical period.

2.2 Contents and requirements

Aim: The student is expected to learn how to develop and carry out scientific research. At first this needs to be done under supervision and in a later stage the student should work more independently. Hypotheses and problems have to be clear to the student from the start. A placement has to include time to perform research independently and it is not allowed to use the student just for routine analysis. It also needs to be clear to the student how the research has to be conducted, and a project description and planning of activities should be present from the start. Included in the scientific research should be a literature survey, theoretical experiment preparation, practical execution, writing of the final report, work discussions and participation in scientific activities at the department. In principle, all facilities will be taken care of by the hosting department (daily supervision, IT and laboratory infrastructure, equipment, lab materials, possibilities for oral presentations and work meetings, and finally supervision of the final report).

To start an internship, the student is required to:
1) have obtained at least 18 ECTS from the compulsory courses in the first semester of the master program;
2) have received approval from the Examiner Internships/Literature Studies (ILS) after filling out the digital approval form.

The Minor internship has to be performed at the Amsterdam UMC (VU/VUmc, Academic Medical Center (AMC)), Sanquin, the Wilhelmina Kinderziekenhuis (WKZ) or the Netherlands Cancer Institute (NKI). The Major internship can be performed in any renowned national or international institute. For every placement a second assessor (Amsterdam UMC assessor) has to be appointed at the minimal level of assistant professor. While it is allowed to do two internships within the same department, it is not allowed to do both internships on the same topic and under supervision of the same daily supervisor. It is allowed to have the same assessor.

The research topic of the Minor internship does not need to be related to the content of the master program, but the topic of the Major internship should. After the Major internship all the end terms of the Master program will be met, and the report based on that internship is considered to be the Master Thesis.

Supplementary conditions

The tasks performed by the student during the internship cannot be considered as a substitute of an employee of the supervisor's department and cannot be considered as work. The department has to accept responsibility for injury, accidents or damage by the student during the presence or during the performance of practical tasks at that department, assuming that the injury, accidents or damage come with the legal responsibility of the department and/or its employees.
The student needs to have a private liability insurance, covering possible costs of events that may happen during an internship and for which the student is legally responsible.

2.3 Supervision and guidance

The following forms of supervision and guidance during the internship can be distinguished:

Examiner Internships/Literature Studies

The Examiner ILS is responsible for the approval of the internship and the application of the correct procedures with regard to the grading process. The examiner has the final responsibility for the assessment and the final grade and is responsible to benchmark and confirm the validity of the assessment done at the host institute. When a student has a grade lower than 6.0 or higher than 8.5, the examiner can contact the assessor to ask for a motivation of the assessment.

Assessor

The assessor has to work at least at the level of assistant professor (UD) and has to be approved by the Examiner ILS. The assessor is responsible for the quality of the internship and the assessment of each of the three assessment items, including the research description and the Interim Assessment. For the assessments, the supervisor has to use the rubrics which are described in Appendix 1. For an internship outside the Netherlands, please check the 'Nuffic Grade Conversion Information' in Appendix 2.
It is recommended that the assessor participates in the research project on a regular basis (preferably in weekly meetings but at least once a month). When the Interim Assessment indicates that the student might fail the internship, the assessor needs to contact the coordinator of the Master. In this case the student will have to write a self-reflection report in which learning goals are discussed to ensure improvement. In addition, the Master coordinator will contact the assessor.

Daily supervisor

The daily supervisor is a person with the scientific background of at least a PhD candidate or an experienced research technician and this person should be working in the lab on a regular basis. This daily supervisor will teach the student practical skills, rules for working in the lab and planning of the experiments. The assessor consults the supervisor for the assessment on all subjects and in particular for the practical assessment.

Amsterdam UMC Assessor

The written report needs to be verified by a second assessor from Amsterdam UMC (VU/VUMC, or AMC). This Amsterdam UMC assessor needs to be invited by the student but has to be approved by the Examiner ILS and has to work at least at the level of assistant professor (UD). The second assessor will critically review the report and give a mark based on the report without considering the writing process or practical skills. For external internships the Amsterdam UMC assessor is also asked to serve as backup for questions of the student and/or the assessor.

3 Course of events during the internship

To successfully complete the internship, the student must hand in a digital and completed Internship Portfolio by the end of the internship. The portfolio must contain a Front page, the List of Agreements (A) and the Research Proposal (B). The Interim Assessment needs to be filled in online via the link on the website www.vu.nl/en (see link below the table) within 6 weeks after the start of the internship. The Internship Evaluation needs to be filled in online via the link on our website www.vu.nl/en (see link below the table). In addition, a PDF file of the report has to be e-mailed to the master coordinator.
Only when the internship is passed (Chapter 4) and the portfolio is complete the student will receive the credits for the internship. The student is responsible for the timely completion (including signatures) of all forms and assessments. The table below provides a time-line that the student has to follow to ensure successful completion of the internship.

	Student	Assessor
1. Month before start	Apply for approval by filling out the digital **Approval Form**.	Accept the digital **Approval Form**.
2. Within 2 weeks after start	Fill out the **List of Agreements (A)** and send to the Master coordinator.	Fill out the **List of Agreements (A)** with the student.
3. Within 6 weeks after start	Hand in the **Research Proposal (B)** to the Master coordinator. Fill out the self-evaluation on the Digital **Interim Assessment Form** and send it to the assessor and daily supervisor one week before the evaluation meeting. The form, including the learning goals, will also be send to the Master coordinator. When necessary in case of insufficient assessment items, write learning goals and plan a next interim meeting.	Correct the **Research Proposal (B)**. Evaluate the student based on the rubrics (Appendix 1) and fill in the **Digital Interim Assessment Form.** If necessary, based on the interim assessment, contact the program coordinator or examiner ILS to discuss if the internship can be continued or not.
4. Halfway	Give an **Oral Presentation**.	
5. End of the Internship	Give a final **Oral Presentation**. Send a pdf of the **Report** to your Amsterdam UMC assessor for the second assessment. Send a pdf of the **Internship Portfolio** together with a pdf of the **Report** to the Master coordinator. Fill out the digital **Internship Evaluation**.	Fill out the digital **Assessment Form**. Make use of the Rubrics (Appendix 1) and the Conversion Table (Appendix 2)

All forms: https://vu.nl/en/student/students-masters-programme-medicine/master-oncology-and-master-personalized-medicine

Approval Form: https://fd20.formdesk.com/vuamsterdam/approvalform_minor_major_ScienceMasters

Interim assessment form: https://fd20.formdesk.com/vuamsterdam/Interim_Assessment_Internship

Assessment form assessor: https://fd20.formdesk.com/vuamsterdam/Assessment_form_internships_ScienceMasters

Assessment form second assessor:
https://fd20.formdesk.com/vuamsterdam/Independent_asessment_Science_Masters

Internship evaluation form:
https://fd20.formdesk.com/vuamsterdam/internshipOC/?get=1&sidn=abcf0a8e6c7a4238acc4f9dde5e7d6dd

3.1 Before the start of the internship

Before starting the internship, the student is required to ask for approval of the Examination Board via the digital Approval Form provided in the following link:
https://fd20.formdesk.com/vuamsterdam/approvalform_minor_major_ScienceMasters.
Hand in the form well in advance to obtain approval in time. Internships can only be started after approval of the Examiner ILS.

Approval of the major internship is no longer valid when the travel code announced by the Dutch Ministry of Foreign Affairs for the relevant country is orange or red. In that case, conducting the scientific internship in the country previously approved is not permitted.
Students who nevertheless want to go abroad for their research internship under code yellow, are obliged to take this up this with their study coordinator or examiner internships. Any costs in the event of cancellation or early return as a result of a change to code orange or red will not be reimbursed by any fund or funds.

3.2 Within 2 weeks

A completed List of Agreements (A) made between the student and the assessor of the internship has to be handed in to the Master coordinator. The List of Agreements includes the date of initiation and termination (including writing of the final report and registration of the final mark) of the placement, coaching, oral presentations, facilities to be used and possible interruptions of the period due to optional courses/holiday. The student should keep a copy of the List of Agreements in the Internship Portfolio.

3.3 Within 6 weeks

The student has to write a Research Proposal (B), which has to include the title and aim of the study, background information, materials and methods, expected results and a time scheme. A format for the Research Proposal is provided in the Internship Portfolio. The student needs to hand in the Research Proposal (B) to the Master's coordinator and keep it in the Internship Portfolio.

The date of the Interim Assessment has been agreed on in the List of Agreements (A). One week before the evaluation, the student has to write a self-reflection (by using the following form: https://fd20.formdesk.com/vuamsterdam/Interim_Assessment_Internship) and send it to the internship assessor. This reflection will be discussed together with the Interim Assessment. The Interim Assessment will also be sent to the Master's coordinator and the Examiner (automatically) to guard the progress of the internship. If the current progress of the internship is insufficient, the Examiner will request learning goals from the student. The student is required to add a copy of the Interim Assessment to the Internship Portfolio as well.

3.4 Halfway the internship

At least two oral presentations are required during an internship: one to practice and one in a later stage to receive a mark for presentation. Halfway through the internship, the student should give the first presentation to the members of the department where the student performs the internship.

3.5 End of the internship

The final assessment will be completed in the presence of both the assessor and daily supervisor and the student. The Rubrics (Appendix 1) must be used for the assessment. Afterwards, the Examiner ILS must validate the Assessment Forms and assess whether it is up to VU-standard. The digital Assessment Form can be found at: https://fd20.formdesk.com/vuamsterdam/Assessment_form_internships_ScienceMasters
This form consists of several criteria (see Appendix I and part 4. Internship assessment) that reflect the Master's programs' final qualifications.

After the assessment forms are filled in by the assessor, the student sends the digital PDF version of the report to the Amsterdam UMC assessor together with the following link:
https://fd20.formdesk.com/vuamsterdam/Independent_asessment_Science_Masters
In addition, the student sends the Internship Portfolio and the digital PDF version of the report to the Master coordinator.

To improve the quality of the internships the student has to fill out the Online Internship Evaluation. This form is also part of the Internship Portfolio. The evaluation can be found at:
https://fd20.formdesk.com/vuamsterdam/internshipOC/?get=1&sidn=abcf0a8e6c7a4238acc4f9dde5e7d6dd

4 Internship assessment

For each part of the internship a partial mark will be given based on specific criteria (See Appendix 1). The final mark is calculated using the weight of 40%-20%-40% for laboratory practice, the final presentation and the final report, respectively.

When the average mark of any of the three assessment items of the internship is insufficient (<5.5), the specific item that was insufficient should be redone. Pending passing of that item, this mark will be listed as the final mark. A maximum of 2 repeats is allowed only for the presentation and the report. An insufficient mark for the practical work leads to a fail directly after which the student has to redo an internship.

4.1 Laboratory practice

The laboratory skills are considered most important for achieving the end terms of the Master's program and therefore comprises 40% of the final mark.

4.2 Oral presentation

An oral presentation concerning the placement and the results will be given to the research group of the department. Emphasis should be on the ability of the student to answer questions and to discuss the research project. The mark for the oral presentation comprises 20% of the final mark.

4.3 Report

The final report of a placement will have the format of a scientific publication, common in the field of research. The report will be written in English and comprises the following compulsory subjects:

- Abstract;
- Introduction/Background with the aim of the study;
- Materials and methods;
- Results;
- Discussion with conclusions and recommendations;
- References.

When necessary, supplementary data can be described in appendices. It is essential that the report is written in such a format that it is clear how experiments have been performed and, if necessary, how they can be repeated. Note: research of students is often part of a larger research theme, and often preliminary data was available at the start, or additional data was collected by others in the group. It is crucial that it is indicated in the report what the precise contribution of the student was.

Agreements have to be made concerning criticism and judging of the report. The supervisor and assessor will receive a complete draft report, and they should return it to the student with written comments within 5 working days. These comments will subsequently be discussed. The draft report will only be corrected twice before the final report is handed in. The mark for the report comprises 40% of the final mark.

The report has to be finished within 3 months after finishing the practical work period of the internship. The final mark for the placement will not be registered when the student fails to submit the electronic version of the written report and the Internship Portfolio to the Master's coordinator.

The report will be checked for plagiarism by the Master's coordinator and this will be sent to the Examiner ILS. The assessor can ask for a copy of this scan before submitting the digital final assessment form. In case that the overlap is more than 20% and/or the examiner ILS decides that it is a possible case of misconduct, the shared examination board Science Masters will be informed.

The student has to send the report to the Amsterdam UMC Assessor for a second assessment. Within 20 working days, the Amsterdam UMC assessor has to fill in the independent assessment form. The independent assessment form can be found at:
https://fd20.formdesk.com/vuamsterdam/Independent_asessment_Science_Masters

When the mark is less than 1.5 point different between the Amsterdam UMC assessor and the assessor, the mark for the report will be the average of the two grades. When this difference is > 1.5 point, the report will be sent to a second independent assessor who will also mark the report. The second independent assessor will be appointed by the examiner ILS. In this case the final mark will be the average of the three grades.

5 Additional information and guidelines

The performed research and the final report are at discretion of the host institution at which the placement is performed. When necessary, agreements about confidentiality can be made between examiners, internal assessors and external assessors. Within the Amsterdam UMC - VU University medical center, the approval to perform the internship already includes these conditions. Some departments have additional separate forms for this.

The student can be co-author at the time of publication of his or her results, when the supervisor deems the contribution sufficient.

The assessor of the host institution is responsible for the completion of the internship and will do everything in his or her power to help the student fulfil all components of the internship assessment in the agreed time frame. All Master's students fall under the Vrije Universiteit Intellectual Property (IP) regulations.
If delay is expected because of IP questions the external supervisor is responsible for discussing the problem with the Master's coordinator and Examiner ILS in advance. Together an appropriate solution will be discussed to minimize delay of the study program and risk for the host institution.

As stated above, reports of internships and studies of literature are centrally archived and will be accessible to future Master's students. Only after a motivated request by an assessor is it possible to not have the file made accessible.

6 Appendices

Appendix 1: Assessment criteria Internship Faculty of Medicine VU Amsterdam

This assessment matrix should be used as a guideline for internship supervisors in the assessment of students enrolled Master Oncology of the Faculty of Medicine VU Amsterdam. The grades in the matrix are rounded grades.

Attitude			
Insufficient (<5.5)	*Sufficient (5.5-6.9)*	*Good (7.0-8.4)*	*Excellent (8.5-10)*
Motivation			
The student carries out research because it is required, but shows little or no interest. The student is frequently absent and/or engages in issues that are not relevant to the investigation. Students are quickly derived from the research tasks.	The student is interested in scientific research and carries out the research, as agreed to in advance, sufficiently. The student spend enough time on the research.	The student works hard and shows large interest in scientific research. The student is enthusiastic and shows a drive to continue in research.	The student works at hard all times and shows exceptional interest in scientific research. The student is a source of enthusiasm and (also) knows how to motivate and inspire others.
Cooperation			
The student prefers to go their own way and is incapable of cooperating. The student only selectively listens to advice. The student shows little insight into their weak points and does not seem to be able to change their behavior based on feedback.	The students cooperates sufficiently and easily becomes part of the group. The students takes advices, feedback and criticisms to heart and is able to use them to improve him/herself. The student helps others when necessary.	The student is good at cooperating with others and asks for advice and feedback when necessary. The student quickly uses the feedback and critique to develop themselves.	The student is excellent at cooperating and often takes the initiative. The student asks for feedback when necessary and is open to criticisms on their research and/or behavior.
Creativity			
The student is incapable of designing new experiments or having input in the process.	The student can design new experiments based on prior research.	The student comes up with several new and interesting experiments that add value to the research question.	The student is able to independently design excellent new and complete experiments that add great value to the project.
Practical Skills			
Insufficient (<5.5)	*Sufficient (5.5-6.9)*	*Good (7.0-8.4)*	*Excellent (8.5-10)*
Safety			
The student does not work in a safe manner and is not knowledgeable in safety rules of a biomedical laboratory.	The student can work safely in a biomedical laboratory and works by the safety rules adequately.	The student has no problem working safely in a biomedical laboratory and is experienced in the safety rules.	The student always works in a safe manner and has excellent knowledge of safety rules in a biomedical laboratory. The student aids their colleagues when necessary with working safely.
Accuracy			
The student is not able to perform experiments accurately and often makes errors that require experiments to be repeated.	The student can perform experiments accurately with few significant errors.	The student has no problems performing experiments accurately and makes almost no errors. The student is efficient.	The student performs experiments flawlessly and is therefore able to greatly improve the amount of work that he/she can do.

Planning

The student is not able to keep to the planning by him/herself. He/she cannot adapt to new circumstances and this results in problems.	The student adheres to the arranged schedule and asks for help in time or asks to change/adjust the schedule.	The student adheres to the planning , and is flexible enough when necessary, to create a new plan and follow it.	The student adheres to the planning , adjusting it as necessary and still remains within the agreed time. The student can perform different activities simultaneously.

Insight

The student is not able to determine the relevance of the experiments within the hypothesis. The students is not able to design new experiments accordingly.	The student is able to determine the relevance of the experiments for the project and design new experiments with help of the supervisor.	The student independently determines the relevance of the experiments and design new experiments with minimal supervision.	The student can independently determine the relevance of the experiments for the hypothesis. The student can use literature to reflect on the acquired results and design new experiments to further prove the hypothesis.

Professional Behavior

Insufficient (<5.5)	*Sufficient (5.5-6.9)*	*Good (7.0-8.4)*	*Excellent (8.5-10)*

Autonomy

The student does not function adequately without rigorous accompaniment of the teacher. The student does not feel responsible (enough) for his/her activities.	The student works independently, and feels responsible for his/her activities.	The student works largely independently. The student feels responsible for his/her activities and is able to reflect on this.	The student works independently and reflects in an excellent manner on his/her activities and learning. The student takes action and shows initiative to solve problems and achieve the best results.

Initiative

The student is biding, does not participate enough in decision-making. The student takes little initiative and is reluctant when changes take place.	The student takes sufficient initiative but sometimes awaits direction of the supervisor.	The student takes the initiative and contributes ideas and possible solutions too. The student takes in consultation with the supervisors decisions.	The student takes initiative easily and is, albeit with approval of the supervisor, able to make independent decisions.

Oral presentation

Insufficient (<5.5)	*Sufficient (5.5-6.9)*	*Good (7.0-8.4)*	*Excellent (8.5-10)*

Presenting skills

The presentation is clearly too long or too short and difficult to follow. The public does not feel engaged Insufficient use of audiovisual aids.	The presentation meets the time standard. Clear manner of presenting. Appropriate use of audiovisual aids.	The presentation meets the time standard. Enthusiastic and clear presentation style. Good use of audiovisual resources. The slides support the presentation.	The presentation meets the meets the time standard. Clear presentation with informative slides. Lively and enthusiastically presented. The presentation is engaging for the audience.

Presentation

The structure is messy and cluttered. It lacks essential information. The argument is (sometimes) unclear. Little scientific justification.	Clear structure with introduction, methods, results and discussion. There is consistency. A clear overview of the research and the main results are given. Sufficient scientific justification.	Clear structure with introduction, methods, results and discussion. There is consistency. There is a good and clear overview of the research and the main results are well-discussed. The arguments put forward are logical, valid and scientifically substantiated.	Excellent structure with introduction, methods, results and discussion. There is consistency. There is a clear overview of the research and the main results are well discussed and placed in context by means of scientific literature. Arguments used are logical and valid. Clear conclusions and recommendations for future research are concrete and of high quality.

Discussion

The student does not adequately address the questions from the audience. The answers are not clear and to the point.	Students answered questions from the audience and used his/her own data and scientific literature. The student gives adequate answers.	Students answered questions from the audience and used this as its own data and scientific literature. The student shows a good overview of the subject and put the questions in a broader context.	The student answers the questions from the public in a clear and appropriate manner showing an understanding of the subject and research field. The student carries out a lively discussion convincingly.

Report - writing process

Insufficient (<5.5)	*Sufficient (5.5-6.9)*	*Good (7.0-8.4)*	*Excellent (8.5-10)*

Process of writing

The student is not able to translate the results and literature into coherent and effective writing within the required amount of time. The student needs a lot of help in this process.	The student is translating the results and literature into coherent and effective writing within the required amount of time. The student needs some guidance.	The student easily and independently translates the results and literature into effective writing.	The students easily and independently translates the results and literature into effective writing on the level of a peer-reviewed scientific paper.

Processing of literature

The student is not able to gather and interpret the correct and relevant literature.	The student is able to gather and interpret literature relevant to his/her project.	The student is able to gather and interpret literature relevant to his/her project and put it into the context of other literature.	The student easily gathers and interprets relevant literature. He/she is able to discern the quality of papers accurately and has a good impression of the scientific consensus.

Processing of results

The student is incapable of interpreting the results and putting them in the context of relevant literature.	The student interprets the results sufficiently with the use of relevant figures and graphs. The student uses some relevant literature to support the results.	The student interprets the results accurately and uses figures and graphs to improve the report significantly. The student uses a variety of relevant literature to support and reflect on the results.	The student easily interprets the results and uses figures and graphs that are of high scientific standard. The students puts the results into context with the most relevant literature and accurately reflects on them.

Overall concept

The student is not able to write a coherent report with a clear structure. The student uses flawed arguments to assess the research question.	The student is able to write a coherent and structured report. The student uses sufficient arguments to assess the research question.	The student is able to write a coherent report with good structure. The student answers the research question using arguments supported by the results and literature.	The student writes an excellent, coherent report with great structure. The student is able to answer the research question fully by using a variety of arguments supported by their results and relevant literature.
Report - content			
Insufficient (<5.5)	*Sufficient (5.5-6.9)*	*Good (7.0-8.4)*	*Excellent (8.5-10)*

Abstract/summary

The summary is incomplete on one or more of the following: context, research question, methodology, results, conclusion. The findings answer the research question insufficient.	The summary is understandable and contains all the components in a logical order: context, research question , methodology, results and conclusion. The findings answer the research question adequately.	The summary is understandable and easy to follow regardless of the internship report. The summary contains all the components in a logical order: context, research question, methodology, results and conclusion. The findings answer the research question in a good, clear way.	The summary shows the essence of the research carried out and is easy to follow regardless of the internship report. The research is summarized well. The summary includes a brief description of the context, research question, methodology, results and conclusion. The findings answer the research question in an excellent, clear manner.

Introduction

The student formulates a research question, however, it is not clearly formulated and not clearly defined. Background information and scientific/social importance the investigation are insufficient and are not described coherently. The introduction does not fully connect to the research questions. The student only uses few references.	The relevance of the research questions, the background, and the scientific/social importance of the research are described. The student sufficient scientific references. The introduction is a coherent whole, but remains somewhat superficial. The introduction is (almost) constructed according to the funnel model (from wide to narrow).	The student uses relevant scientific literature to introduce and support, the background information, scientific/social importance and the research question. This leads to new insights and the student ends up with a clear and defined research question. The introduction follows the funnel model (from wide to narrow) correctly.	The introduction consists of an in-depth analysis of the problem using relevant scientific credentials of high quality. This thorough analysis opens up new insights and logically follows the research question. The research question is clear and defined. There is great consistency in the text. The introduction is deepening, but also gives an overview of the study area. The introduction follows the funnel model (from wide to narrow) in an excellent manner.

Materials and methods

The method does not (fully) fit the research question. the student shows little understanding of the selected methods and analytical techniques. The methodology is unclear and / or incomplete described.	The described method applies to the research question and contains all parts for research question to answer. The materials and methods show that student understands the chosen method and analysis.	The described method applies to the research question and contains all parts for the research question to be answered. The student can justify the chosen methods and analytical techniques and describes this complete and transparent.	The student can justify the chosen methodology and analysis compellingly. The method and analysis are complete and insightful, described in such a way that another researcher research can smoothly and without further explanation reproduce. If applicable, the student can describe complex techniques appropriately.

Results

The presentation of the data is unclear and/or incomplete. The results did not adhere (sufficiently) to the research question and/or the method section.	The results are adequately described. The results are related to the research question. The student presents the results in tables, charts and/or figures again and combine these into text.	The results provide a complete and thorough analysis of the data and are fully consistent with the research question. The results are well structured and neatly presented in tables, charts and/or figures that are well explained in the text.	The results indicate a complete thorough and orderly analysis of the data again and are fully consistent with the research question. Where necessary, tables, charts and/or figures used with a clear explanation in the text. The results section shows that the student has an excellent understanding of the methodology and analysis.

Discussion/conclusion

The discussion is incomplete and does not contain all the essential elements as mentioned above. There is insufficient reference to relevant scientific literature. The conclusions give no or only partially answer to the research question.	The discussion includes all essential elements such as mentioned above. Adequate scientific references are used. The research question is sufficiently answered but the discussion is somewhat superficial.	The discussion includes all essential elements as mentioned above and describes them clearly. The student has sufficient knowledge to put the results in a broader context and makes good use of scientific literature. The research question is clearly answered. The student uses scientific references to reflect on their own research.	The student shows insight in the scientific field. Student presents a concise but complete evaluation of their findings in light of the theoretical background and recent scientific literature. Limitations are found and feasible solutions are proposed. The research question is coherently answered.

Appendix 2: Nuffic Conversion Table for internships outside the Netherlands

See next page.

www.nuffic.nl

Kortenaerkade 11/ P.O. Box 29777
2502 LT The Hague / The Netherlands
+31 (0)70 426 02 60

nuffic

FACTSHEET

Grading systems in the Netherlands, the United States and the United Kingdom

Suggestions for grade conversion

Grading scales in different education systems are often misinterpreted and grading practices in other countries are easily misunderstood. The world of international student mobility is full of examples of students applying for admission to a university in another country and being refused on the grounds that their grades are not good enough, even if their grades are considered high by the standards in their own country's system. In most cases the problem simply comes down to a lack of information. Experience shows that this problem is significantly mitigated when institutions provide degree and diploma supplements, explaining the grading scale used. Ideally, these supplements should include the percentages for which grades are awarded at the institution so that the grades of the student concerned may be clearly understood.

This article identifies some of the main differences between the Dutch grading system, which is based on a numeric scale of 1 through to 10, and the letter grades used in the United States and the United Kingdom. The article concludes with a grade conversion table for these three countries.

The grading scale in the Netherlands

In the Netherlands, the traditional grading scale is from 1 through to 10, where 1 is the lowest and 10 the highest grade. The pass mark for a single subject is 6, but for school leaving examinations, where six or more subjects are examined, two 5s or one 4 may be condoned if compensated by high grades in other subjects. Grades 1 through to 4 are very rarely given, and the same is true for grades 9 and 10. The most common grades in both secondary and higher education are 6 and 7. Grading in secondary and higher education differs to the extent that high grades are slightly less frequent in secondary education than in higher education.

Data from 2010 on examination results for the pre-university stream (VWO[1]) reveal the following distribution (in percentages) of the grades awarded:

10	=	0.1
9	=	2.4
8	=	12.5
7	=	34.3
6	=	38.5
5	=	10.7
4	=	1.4
3	=	0.08
2	=	0.01
1	=	0.0

[1] *VWO = Voorbereidend Wetenschappelijk Onderwijs, or preparatory university education. This is the most selective of the three main streams in general secondary education in the Netherlands. The VWO diploma grants access to university education.*

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Grading culture

Grading practice in the Netherlands differs from that in the US and the UK inasmuch as the top grades (10 and 9) are rarely awarded, regardless of the actual achievements of a given group of students. This is part of the grading culture in the Netherlands. When the 1 through to 10 scale was officially introduced back to the late 19th century, it was decided that a 10 should only be awarded in cases of absolute perfection. Furthermore, as at the time it was felt to be almost blasphemous for mere mortals to be judging what constituted absolute perfection, a 10 was hardly ever awarded. A 9 was considered to be only a slightly less impossible goal to reach. With the advent of multiple choice testing and yes/no answers to questions, 10s and 9s actually came within reach of ambitious students. To this day, however, these grades are still very rarely awarded in oral examinations or open question testing, such as essays, presentations, project reports or dissertations.

This tradition is different from what is customary in the US, where high grades are awarded to reward and encourage rather than single out absolute perfection. Statistics show that North American educators have always been more generous in the awarding of grade As than their European counterparts. The danger in this practice is that it may lead to grade inflation, which in fact, has become a trend in American higher education over the past 30 years. Grade inflation may well be linked to a more competitive attitude in American higher education, where it is far more common for students to compete for scholarships and where admission to the best universities depends on having the best grades. By contrast, university admission in the Netherlands, as in most continental European countries, is not so much based on high grades as on having the right school leaving certificate. The type of secondary school attended and the type of examination subjects taken are accorded more importance than the individual grades obtained. In the Netherlands, secondary education is divided into different academic and vocational streams with differing educational aims. Of these, the pre-university stream (VWO) is the most selective, accounting for just 17% of the entire student population in secondary education. Consequently, the pre-university stream has always served as a selection mechanism in itself, and the examination results of individual students are considered to be less important than possession of the VWO diploma.

The wrong approach

When thinking about grade conversion, differences in culture and education systems as described above must be taken into account. If grading scales are simply placed side by side, and, starting from the top, each grade in one scale is equated to the grade in the corresponding position in the other scale, serious mismatches will be the result. If, for example, we placed the Dutch numeric scale side by side either the American or the British letter scale, a Dutch 10 would be equated to an American or British A, a 9 to a B, an 8 to a C and so on. While it may seem unlikely that anyone would take such an approach, conversions like these have been known to happen. There are examples of foreign universities requiring a 10 in all seven examination subjects on the Dutch VWO diploma, where it was apparently reasoned that, if 10 is the top grade awarded in the Netherlands, a top student from the Netherlands should have a 10 in each subject. In reality, the chance of attaining a 10 in all seven subjects is close to nil.

Frequency distribution

Clearly, this is not a realistic approach. If grades are to be compared fairly, grade conversion should instead be based on the frequency distribution of grades. Only when the percentages are known for the various grades awarded can grades from different systems be matched. Looking at the 2010 data on the highest-achieving VWO graduates for example, we know 12.5% were awarded a grade 8 (2.4% a grade 9 and 0.1% a grade 10). Therefore, in order to convert this properly to a grade under another country's grading system, we need to know which grade was awarded to the lower 12.5% of the top 15% of students in that system.

When analysing the frequency distribution of passes in the Dutch, American and British grading systems, the

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pattern that emerges is that the two most common grades in the Dutch system are at the lower end of the scale of pass grades (6 and 7), while the two most common grades in the American and British systems are to be found at the higher end (A and B). In Dutch secondary education, grades 6 and 7 are awarded in 39% and 34% of cases respectively. In the UK, A* and A are awarded in 27% of cases and the B in 26%[2]. National percentages for high school examination grades in the US are not available, but the occurrence of A and B in undergraduate studies at American universities is about 40% (and even higher in postgraduate education).[3]

Conversion table

The following table is based on the data available for secondary education examinations in the Netherlands and the UK. For the US, the grades are taken from academic transcripts of undergraduate programmes issued by American universities.

Note: In pre-university education (*General Certificate of Education*) in the UK, grades run from A*, A, B, C, D to E. In the US, pass grades normally only include A, B, C and D. In the British system the asterisk (*) is only used in relation to a grade A, as the highest grade possible. In the US system, the * is not used, but schools and universities may use + or - to differentiate grades.

NL	UK	US
10	A*	A+
9.5	A*	A+
9	A*	A+
8.5	A*	A+
8	A	A
7.5	A-	A
7	B	B+
6.5	C	B
6	D	C
5.5	E	D
5	F	F
4	F	F
3	F	F
2	F	F
1	F	F

[2] *The distribution of grades obtained by GCE A-level graduates in 2011 is as follows:*
A = 8.2% B = 25.6% D = 15.1%*
A = 18.8% C = 23.6% E = 6.5% U (unclassified) = 2.2%.
(source: Joint Council for Qualifications).

[3] *These percentages are taken from a sample of 50 academic transcripts issued by American universities and submitted to Nuffic.*

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In the UK, honours bachelor's degrees are awarded with a class, indicating the overall performance of the graduate during the programme and at examinations. Classes are normally divided into four categories: first class honours (1), second class honours, upper division (2.i), second class honours, lower division (2.ii), and third class honours (3rd). In the following table lists the classes and the percentages of graduates awarded each class, next to the grades to which they correspond in the Dutch grading system (the class percentages are rounded off to the nearest multiple of 5).[4]

UK honours bachelor's degree	corresponding Dutch grade
First class (ca. 15%)	grades 8, 9 and 10
Second class, upper division (ca. 50%)	7 to 8
Second class, lower division (ca. 30%)	6 to 7
Third class (ca. 5%)	5.5 to 6

This article was prepared by the International Recognition Department of Nuffic. By appointment of the Ministry of Education and Sciences this department serves as the Netherlands information centre or academic and professional recognition in the context of the networks of national information centres of the European Union (NARIC) and of the Council of Europe/UNESCO (ENIC): http://www.enic-naric.net.

[4] *Statistics are taken from the Higher Education Statistics Agency in the UK.*

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