

# **Rules and Requests of the Examination Board of the Faculty of Science, Radboud University Nijmegen 2018-2019.**

## **General section**

### **1. Extent**

These rules and requests are applicable to all (partial) exams of the Bachelor's and Master's programmes of the Faculty of Science (hereinafter referred to as the faculty)

- a. Bio Sciences: bachelor Biology, master Biology, master Medical Biology.
- b. Computer Science & Information Sciences: bachelor Computing Science, master Computing Science, master Information Science.
- c. Molecular Sciences: bachelor Molecular Life Sciences, master Molecular Life Sciences, bachelor Chemistry, master Chemistry, bachelor Science, master Science.
- d. Mathematics, Physics and Astronomy: bachelor Mathematics, master Mathematics, bachelor Physics and Astronomy, master Physics and Astronomy.

These rules and requests are composed by the involved Examination Boards, in agreement with the Education and Examination Regulation (EER) that is established by the Faculty Board. The concepts mentioned in these Rules and Requests have the same meaning as described in the EER.

### **2. The everyday course of events and composition of the Examination Board**

- a. In accordance with the faculty regulations, every Examination Board exists of at least three and at most 10 members and a majority of those members is part of the current scientific staff that provides the education in the respective programme(s).
- b. The Examination Board appoints one of their members as the vice-chair.
- c. The vice-chair replaces the chair if necessary.
- d. The Examination Board makes decisions based on the majority of the votes. If the vote results in a draw, the chair makes the final decision.
- e. The Examination Board creates rules with regards to signing documents on behalf of the Examination Board and could thereby delegate specific authorization to non-members.

### **3. Exams**

- a. In accordance with the WHW (Higher education and Research Act), a student who is enrolled in a Bachelor's programme cannot participate in exams of one of the Master's programmes.
- b. Written exams and papers which grades contribute to the final grade of a component must be saved for at least two years in the archive of the respective examiner.
- c. The Examination Board can provide a student with permission to take an exam on a different date than the originally planned date. The Examination Board will only decide based on a motivated request of the student if there is a positive advice from the respective lecturer and the student advisor of the programme.

#### **4. Appointment of examiners**

- a. The Examination Board will appoint an examiner for each component.
- b. Examiners can be:
  1. Members of the science faculty who have a permanent position at the Radboud University (professors, senior university lecturers, university lecturers) and are in possession of a UTQ or SUTQ;
  2. Members of the supporting staff with the UJCS-profile “teacher” (University Job Classification System);
  3. Faculty members with a tenure-track position, who are in possession of a UTQ or in the middle of acquiring a UTQ.
- c. Examiners for individual components will be nominated by the educational director based on their educational qualifications and expertise.
- d. The appointment of an examiner, as mentioned in paragraph 4a, is valid for a period of one year and will be extended automatically, unless the Examination Board decides differently.

#### **5. Exam content and grading**

- a. At the beginning of each component, the examiner informs the students of the learning outcomes of that particular component. An exam tests the learning outcomes proportionally to their importance.
- b. The requirements that every (partial) test has to meet will be communicated to the students well ahead of time.
- c. When it comes to a written (partial) exam, the sources that students are allowed to use during the exam have to be shared with the student well ahead of time.
- d. When a (partial) exam contains different components, the way in which the final result is derived from these results is communicated with the students by the examiner at the beginning of every component.
- e. Components can be graded with the following grades: 10,0; 9,5; 9,0; 8,5; 8,0; 7,5; 7,0; 6,5; 6,0; 5,0; 4,5; 4,0; 3,5; 3,0; 2,5; 2,0; 1,5; 1,0, or with the rating “pass”.
- f. A sufficient final grade means: 6 or higher, or “pass”.
- g. If the final result of a component is decided by a final exam (or multiple partial exams) as well as other partial grades (for example lab courses, seminars, presentations, etc.), the final grade cannot be sufficient when the final exam (or the average of multiple partial exams) is graded with less than a 5.0.
- h. If the final grade for a final project is decided by different partial grades (for example practical work, report, presentations, etc.) then every partial grade has to be at least 5.0.
- i. If both the examiners of a final project give a partial grade or final grade that differs more than a whole point from the other, and this difference is maintained after mutual reflection, the Examination Board will appoint a third examiner who determines the final binding grade.
- j. The final grade of the final project has to be signed by an examiner acknowledged by the Examination Board.
- k. The administrative date for a written exam is the date of the exam. For a lab course, this is the date on which all data and reports have to be submitted.

## **6. The course of events during exams**

- a. The examiner makes sure that the questions of a written exam are examined by a second lecturer beforehand.
- b. The examiner makes sure that there are invigilators present at such exams, who ensure the exam runs smoothly and in accordance with the Invigilators Protocol FNWI. The invigilators should be aware of the sources the students are allowed to use. They should also be aware of the way a student, who has the permission of the Examination Board to take the written exam in an adjusted form, can take this exam.
- c. The examinee (the student who takes a test or an exam) is obligated to legitimize themselves during the exam using their student ID, passport, ID, or drivers licence, at the request of the Examination Board.
- d. The examiner can decide that the exam questions are not allowed to be taken by the examinee after the exam is done.
- e. The examinee provides enough paper and writing tools when taking a written exam. The examiner can decide to provide paper themselves; the examinee is then obligated to use it.
- f. The examinee is obligated to follow the instructions of the Examination Board or examiner that were published before the start of the exam as well as the instructions provided immediately before, during, and immediately after the exam.
- g. If the examinee does not oblige to one or more instructions as mentioned in the previous paragraph, then he or she can be excluded from further participation in the exam or components of the exam by the Examination Board or the examiner for disturbance. As a consequence of that exclusion, there is no result determined for that exam and the examinee will be excluded from taking the exam or components of that exam again in the same academic year. Before the Examination Board takes a decision to exclude the examinee, they grant the examinee the opportunity to be heard.
- h. If an examinee is caught committing fraud during an exam, rules apply to the examinee which are mentioned in the attachment of the EER.

## **7. Exemptions**

- a. A request for exemption from an exam or component is assessed by the Examination Board.
- b. The Examination Board makes their decision one month after receiving the request. The person making the request will immediately be notified of the decision.

## **8. Exams**

- a. A student passes the propedeutic exam if all sections of the propedeutic programme are marked with a sufficient grade (at least 6 or “pass”).
- b. In all other cases, the examinee fails the propedeutic exam
- c. A student passes the Bachelor’s exam if they are in possession of the propedeutic diploma and if all the components of the post-propedeutic programme all sections are marked with a sufficient grade (at least 6 or “pass”).
- d. In all other cases, the examinee is denied from the Bachelor’s exam.
- e. A student passes the Master’s exam if all components of the master programme are marked with a sufficient grade (at least 6 or “pass”).
- f. In all other cases, the examinee is denied from the Master’s exam.

## 9. Distinctions

- a. The Examination Board can add the distinction “cum laude” to the result of an exam if the weighted average based on ECs of the results of all components is at least 8.0.
- b. The Examination Board can add the distinction “summa cum laude” to the result of an exam if the weighted average based on ec of the results of all the components is at least 9.0.
- c. An distinction for the propedeutic exam is determined on the basis of the assessments of components of the propedeutic programme; the one for the Bachelor’s exam on the basis of the assessments of components of the propedeutic as well as the post-propedeutic programme; and the one for the Master’s exam on the basis of the assessments of the components of the Master’s programme.
- d. An distinction is solely determined on the basis of the nominal number of ec that is required for the exam (curricular components).
- e. Components assessed with “pass” are not included when determining an distinction.
- f. An distinction is not granted if the extent of the granted exemption includes more than 50% of the programme, considering possible further restrictions to the number exemptions as stated in the EER.
- g. An distinction is not granted if more than 10% of the programme had to be retaken (18ec of the Bachelor’s programme; 12 ec of the Master’s programme).
- h. An distinction is not granted if a student has been caught committing fraud during their programme and this is recorded in the student file.

When granting the distinction “cum laude” the following criteria are used:

- i. The weighted average based on ec of the assessments of all exam components with a weight of less than 20 ec has to be at least 8.0 before the grade is rounded off.
- j. The weighted average based on ec of the assessments of all exam components with a weight of 20 ec or more has to be at least 8.0 before the grade is rounded off.

When granting the distinction “summa cum laude” the following criteria are used:

- k. The weighted average based on ec of the assessments of all exam components with a weight of less than 20 ec has to be at least 9.0 before the grade is rounded off.
- l. The weighted average based on ec of the assessments of all exam components with a weight of 20 ec or more has to be at least 9.0 before the grade is rounded off.

## 10. Final projects

Internships and theses in both the Bachelor’s and Master’s programme are individually assessed on the basis of the individually submitted reports. If students make a request before starting with the internship/thesis the Examination Board can, in exceptional cases, give permission for a joint internship/thesis assignment. In this request, the following components should be described:

- a. Usefulness and necessity of a joint assignment.
- b. A description of the individual part of the assignments and the responsibilities per student.
- c. A description of the joint (interim) assignments and the responsibilities of the students.
- d. A clear description of the ways in which individual and joint aspects of the internship/thesis assignment will be assessed.
- e. Under all circumstances, each student should submit a report/thesis separately.

### **11. Switch within the first year (propedeutic phase) of the programme**

All the students who switch to one of the programmes in the same educational institute during the first year (propedeutic phase) of the programme, will have the results of the components that belong to this second propedeutic programme on their propedeutic diploma as grades (unless otherwise assessed) under the condition that the student does not continue with the first programme.

### **12. Double Post-Propedeutic Phase**

The propedeutic programme will be mentioned as an exemption (VR) on the diploma supplement for students who are admitted to a second post-propedeutic programme after the propedeutic phase and choose to finish two post-propedeutic programmes. This exemption is based on the finished propedeutic programme of the first programme.

### **13. Premaster**

To assess if a student met the requirements of a premaster, the same rules apply as for an exam.

### **14. Changes and Unforeseen**

- a. No changes in these rules will take place that apply to the current academic year unless this does not reasonably damage the interests of the students.
- b. In cases in which the current Rules and Regulations do not accommodate, or there is doubt concerning, the interpretation, the Examination Board makes a decision.
- c. The Examination Board is qualified to make an exception regarding the EER and the Rules and Regulations in individual cases and in a well-founded manner.

### **15. Commencement**

These Rules and Regulations will be valid from September 1, 2018, onward.

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## **Attachment 1**

### ***Rules and requests Examination Board Computing Science and Information Sciences 2018-2019 supplementary to the faculty-wide rules and requests.***

#### **1. Language master thesis and master talk**

The code of conduct for foreign languages mandates that your master thesis will be written in English and that you will speak in English during your graduation speech. In case of strong reasoning, the Examination Board could provide permission to deviate from this rule.

#### **2. Homework-guideline**

When assessing course dossiers, the examination board deems it acceptable if no exam matrix or assessment protocol is given for homework/bonus rules that meet the following requirements:

##### **Guidelines**

- The maximum weight for the homework is 10% of the exam grade.
- In the exam regulations (exam matrix, assessment protocol, etc.) these components do not need to be specified.

It is not necessary to give students a resit possibility for homework.

(For exams/labs/presentations/papers it is expected that an exam matrix and assessment protocol are included in the course dossier)

##### **Explanation of the homework guideline:**

The exam of a course (summative testing, “testing for a grade”) normally consists of a written exam and/or paper, project report, presentation, etc.

Formative testing (interim checks, practising, receiving feedback) is an important aspect of education. This formative testing often consists of homework exercises, in which aspects are practised that are part of the exam. In order to stimulate the participation of students, teachers sometimes make these results contribute to the exam grade, which gives a summative character to what was intended as formative testing.

##### **Consideration:**

The education board feels it is detrimental if these kinds of results (for convenience indicated as “homework”) are valued too much in the examination, for two reasons:

- The improper merging of practising (and learning from mistakes) and being assessed has to be avoided;
- The circumstances in which homework is completed (individually, in groups, and with or without the help of computers) are hard to control.

### **3. Expansion of the Master internship**

The student in the master programme is allowed to expand the internship with a maximum of 15 ec after approval of the examination board. A substantiated argumentation with the approval of the supervising lecturer has to be submitted to the examination board.

### **4. Premaster**

The examination board will declare that someone graduated from the pre-programme if every course is passed with a sufficient grade. Deviating from this, one insufficient result (if this result is a grade not lower than a 5.0) is allowed.

### **5. Double Bachelor Mathematics and Computing Science**

1. Students who chose a double major in Mathematics and Computing science must earn more ec in the propedeutic phase (75 ec) and the post-propedeutic phase (150 ec).
2. The mandatory mathematics course NWI-WB093 Complex Analysis (6 ec) can be replaced by the physics course NWI-NB019C Complex Functions (3 ec) in the post-propedeutic phase.
3. Every student must meet the requirements of course NWI-WP017B Portfolio Mathematics Year 1 (0 ec). Every student must meet the requirements of course NWI-WB071 Portfolio Bachelor Mathematics (3 ec) or the course NWI-IBI010 Reflection and Vocational Orientation (3 ec).
4. The course NWI-FFIL100 Introduction Philosophy and Ethics of Science (3 ec) can be replaced by the course NWI-I00036 ICT and Society (3 ec) in the post-propedeutic phase.
5. One Bachelor internship (12 ec) can be fulfilled at a Mathematics or Computing Science department of choice.
6. The elective space of the double bachelor programme (225 ec) is 21 ec.
7. Of this elective space, 12 ec must be filled with electives from one of the specialisations in computing science. For the specialisation Software and Data Science the courses are NWI-IBI008 Data Mining (6 ec), and the choice between a) NWI-IBC024 Software Verification (3 ec) and NWI-IBC025 Semantics and Rewriting (3 ec), or b) NWI-IBC036 Big Data (6 ec). For the specialisation Cyber Security the courses are NWI-IPC026 Web Security (3 ec), NWI-IBC034 Operating Systems Security (3 ec), and NWI-IBC023 Introduction to Cryptography (6 ec).
8. The remaining elective space (9 ec) must be filled out with mathematics courses. The programme mathematics yearly publishes a series of electives that are ideally suited to fill this elective space and match the master programmes Mathematics and Computing Science.

Exemption from Computer Science courses on the basis of mathematics courses

- The mathematics course NWI-WP027 Linear Algebra A (6 ec) counts as an exemption from the Computer Science course NWI-IPC017 Matrix Calculation (3 ec).
- The mathematics course NWI-WP029 Introduction Mathematics (6 ec) counts as an exemption from the Computer Science course NWI-IPC020 Mathematical Structure (3 ec).
- The mathematics course NWI-WB011C Discrete Mathematics (6 ec) counts as an exemption from the Computer Science course NWI-IBC016 Combinatorics (3 ec).
- The mathematics courses NWI-WP025 Calculus A (6 ec) and NWI-NB004B Probability (3 ec) count as exemptions from the Computer Science course NWI-IBC017 Calculus & Probability Theory (3 ec).

- The mathematics course NWI-WB008C Logic (6 ec) counts as an exemption from the Computer Science course NWI-IPI004 Logic & Application (6 ec).



## Attachment 2

*Rules and requests of the Examination Board Mathematics, Physics & Astronomy 2018-2019, supplementary to the faculty rules and regulations.*

### **1. Double Bachelor Mathematics and Computer Science**

1. The double bachelor Mathematics and Computer Science is a study programme that contains more ec in the propedeutic phase (75 ec) and the post-propedeutic phase (150 ec).
2. In the post-propedeutic phase, the obligated mathematics course NWI-WB093 Complex Analysis (6 ec) can be substituted by the physics course NWI-NB019C Complex Functions (3 ec).
3. Every student must meet the requirements of the course NWI-WP017B Portfolio Mathematics Year 1 (0 ec). Every student must meet the requirements of the course NWI-WB071 Portfolio Bachelor Mathematics (3 ec) or the course NWI-IBI010 Reflection and Career Orientation (3 ec).
4. In the post-propedeutic phase, the course NWI-FFIL100 Introduction Philosophy and Ethics (3 ec) can be substituted by the course NWI-I00036 ICT and Society (3 ec).
5. In the post-propedeutic phase, there is one Bachelor internship (12 ec) in a Mathematics or Computer Science department of choice.
6. The elective space of the double bachelor programme (225 ec) covers 21 ec.
7. Of the remaining elective space, 12 ec must be filled with electives from one of the specialisations of computing science. For the specialisation Software and Data Science the courses are NWI-IBI008 Data Mining (6 ec) and the choice between a) NWI-IBC024 Software Verification (3 ec) and NWI-IBC025 Semantics and Rewriting (3 ec), or b) NWI-IBC036 Big Data (6 ec). For the specialisation Cyber Security the courses are NWI-IPC026 Web Security (3 ec), NWI-IBC034 Operating Systems Security (3 ec), and NWI-IBC023 Introduction to Cryptography (6 ec).
8. The remaining elective space (9 ec) must be filled with mathematics courses. Annually, the programme Mathematics publishes a series of electives that are ideally suited to fill this elective space and match the master programmes Mathematics and Computing Science.

Exemptions from Computer Science courses on the basis of mathematics courses

- The mathematics course NWI-WP027 Linear Algebra A (6 ec) counts as an exemption from the Computer Science course NWI-IPC017 Matric Calculation (3 ec).
- The mathematics course NWI-WP029 Introduction to Mathematics (6 ec) counts as an exemption from the Computer Science course NWI-IPC020 Mathematical Structures (3 ec).
- The mathematical course NWI-WB011C Discrete Mathematics (6 ec) counts as an exemption from the Computer Science course NWI-IBC016 Combinatorics (3 ec).
- The mathematics courses NWI-WP025 Calculus A (6 ec) and NWI-NB004B Probability Theory (3 ec) count as exemptions from the Computer Science course NWI-IBC017 Calculus & Probability Theory (3 ec).
- The mathematics course NWI-WB008C Logic (6 ec) counts as an exemption from the Computer Science course NWI-IPI004 Logic & Applications (6 ec).

## 2. Double Bachelor Mathematics and Physics and Astronomy

1. The double bachelor Mathematics and Physics and Astronomy is a study programme that contains more ec in the propedeutic phase (75 ec) and the post-propedeutic phase (150 ec).
2. Every student must meet the requirements of the course NWI-NB075 Portfolio Bachelor Physics and Astronomy (3 ec) or the course NWI-WB071 Portfolio Bachelor Mathematics (3 ec).
3. In the post-propedeutic phase, the obligated physics course NWI-NB008D Laboratory Course Physics 2b (6 ec) can be substituted by the physics course NWI-NB065B Laboratory Course Physics 2c (3 ec).
4. In the post-propedeutic phase, the obligated mathematics course NWI-WB093 Complex Analysis (6 ec) can be substituted by the obligated physics course NWI-NB019C Complex functions (3 ec).
5. In the post-propedeutic phase, the obligated mathematics course NWI-WB008C Logic becomes a recommended elective. <sup>a</sup>
6. In the post-propedeutic phase, there is one Bachelor internship (12 ec) in a Mathematics or Physics department of choice.
7. The elective space of the double bachelor programme (225 ec) covers 33 ec.
8. Annually, the programme publishes a series of electives that are ideally suited to fill this elective space and match the master programmes Mathematics and Physics and Astronomy.
  - a. The double bachelor programme supplementary provides the required broad orientation of the mathematical field of study, the insight in the social function of the disciplines and acquiring the necessary skills in different disciplines (Bachelor EER Mathematics, par. 7.1.1 and 7.1.2).

Students who successfully completed the propedeutic phase (75 ec) containing more ec, are eligible for an expanded elective space (6 ec instead of 3 ec) in the propedeutic programme physics, to compensate for the obligated course NWI-NP015B Kaleidoscope Astronomy, which, for them, is part of the obligatory post-propedeutic programme.