



Teaching and Examination Regulations (TER)

Faculty of Science

Bachelorprogramme in Artificial Intelligence

Academic year: 2019-2020

A: Faculty section

B1: Programme specific section – general provisions

B2: Programme specific section – content of programme

Index

| | |
|---|-----------|
| Section A: Faculty section | 4 |
| 1. General provisions | 4 |
| Article 1.1 Applicability of the Regulations | 4 |
| Article 1.2 Definitions | 4 |
| 2. Study programme structure | 5 |
| Article 2.1 Structure of academic year and educational components | 5 |
| Article 2.2 Frame study programme | 5 |
| 3. Assessment and Examination | 6 |
| Article 3.1 Signing up for education and interim examinations | 6 |
| Article 3.2 Type of examination | 6 |
| Article 3.3 Oral interim examinations | 6 |
| Article 3.4 Determining and announcing results | 6 |
| Article 3.5 Examination opportunities | 7 |
| Article 3.6 Marks | 7 |
| Article 3.7 Exemption | 8 |
| Article 3.8 Validity period for results | 8 |
| Article 3.9 Right of inspection and post-examination discussion | 9 |
| 4. Honours programme | 9 |
| Article 4.1 Honours programme | 9 |
| 5. Academic student counselling, advice regarding continuation of studies and study progress | 10 |
| Article 5.1 Administration of study progress and academic student counselling | 10 |
| Article 5.2 Advice regarding continuation of studies | 10 |
| Article 5.3 Binding (negative) recommendation on continuation of studies (BSA) | 10 |
| Article 5.4 Personal circumstances | 11 |
| Article 5.5 Adaptations for students with a disability | 11 |
| 6. Hardship clause | 12 |
| Article 6.1 Hardship clause | 12 |
| Article 6.2. Publication | 12 |
| Section B1: Programme specific – general provisions | 13 |
| 7. General programme information and characteristics | 13 |
| Article 7.1 Study programme information | 13 |
| Article 7.1a. Deviant size of educational component | 13 |
| Article 7.2 Teaching formats used and modes of assessment | 13 |
| 8. Further admission requirements | 13 |
| Article 8.1 Additional previous education requirements | 13 |
| Article 8.2 Colloquium doctum (entrance examination) | 13 |
| 9. Interim examinations and results | 15 |
| Article 9.1 Sequence of interim examinations | 15 |
| Article 9.2 Validity period for results | 15 |
| Article 9.3. Degree | 15 |
| Section B2: Programme specific – content of programme | 16 |
| 10. Programme objectives, specializations and exit qualifications | 16 |
| Article 10.1 Programme objective | 16 |
| Article 10.2 Majors (specializations) | 16 |
| Article 10.3 Exit qualifications | 16 |
| Article 10.4 Language test | 19 |
| 11. Curriculum structure | 19 |
| Article 11.1 Academic development | 19 |
| Article 11.2 Major | 19 |
| Article 11.3 Compulsory educational components of the major | 19 |
| Article 11.4 Participation in practical exercise | 20 |

| | |
|---|-----------|
| 12. Electives | 20 |
| Article 12.1 Elective period | 20 |
| Article 12.2 Minors..... | 21 |
| 13. Honours programme | 22 |
| Article 13.1 Faculty Honours components | 22 |
| 14. Binding recommendation on continuation of studies (BSA) | 23 |
| Article 14.1 Binding (negative) recommendation | 23 |
| 15. Evaluation and transitional provisions | 23 |
| Article 15.1 Evaluation of the education | 23 |
| Article 15.2 Transitional provisions | 23 |
| Appendix I Overview of articles that must be included in the OER..... | 24 |
| Appendix II Overview of rights to prior consultation (advice) and rights to approve OLC and FGV .. | 25 |
| Appendix III Ordinances VU Executive Board (CvB) and Binding Bachelor's Guidelines..... | 26 |
| Appendix IV Article 2.1 of the WHW Implementation Decree (1 juni 2018) | 27 |

Section A: Faculty section

1. General provisions

Article 1.1 Applicability of the Regulations

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| <p>1. These Regulations apply to anyone enrolled for the programme, irrespective of the academic year in which the student was first enrolled for the programme. These regulations apply to the following Bachelor's programmes:</p> <ul style="list-style-type: none"> ▪ Biomedical Sciences ▪ Business Analytics ▪ Computer Science ▪ Information Sciences ▪ Artificial Intelligence ▪ Mathematics | <p>Advice OLC, approval FGV (9.38 sub b)</p> |
| <p>2. These Regulations enter into force with effect from 1 September 2019.</p> | <p>Advice OLC, approval FGV (9.38 sub b)</p> |
| <p>3. An amendment to the Teaching and Examination Regulations is only permitted to concern an academic year already in progress if this does not demonstrably damage the interests of students.</p> | <p>Advice OLC, approval FGV (9.38 sub b)</p> |

Article 1.2 Definitions

The following definitions are used in these Regulations (*in alphabetical order*):

- a. academic year: the period beginning on 1 September and ending on 31 August of the following calendar year;
- b. (BSA) from the earlier study programme(s): earlier study followed at and/or outside the Vrije Universiteit Amsterdam (including study programme followed earlier at the faculty of Science)
- c. CvB: the Executive Board of Vrije Universiteit Amsterdam.
- d. double degree programme: joint programme in the context of cooperation between Vrije Unviersiteit Amsterdam and the educational institution within and outside the EU, as to gain a double university degree; of the VU and the educational institution concerned; though not being the same as a 'joint degree programme' according to the art. 7.3.c WHW;
- e. EC (European Credit): an EC credit with a workload of 28 hours of study;
- f. educational component: a unit of study of the programme within the meaning of the WHW
- g. examination: the final examination of the Bachelor's programme;
- h. exemption: Exemption from an examination/ practical/ fieldwork based on an earlier successfully completed examination, or knowledge / skills of a similar content, level and scope gained outside higher education
- i. FGV: Faculty joint assembly – assembly of the faculty student council and faculty staff council;
- j. interim examination: an assessment of the student's knowledge, understanding and skills relating to a course component. The assessment is expressed in terms of a final mark. An interim examination may consist of one or more partial examinations. A resit always covers the same material as the original interim examination;
- k. joint degree: a degree awarded by an institution together with one or more institutions in the Netherlands or abroad, after the student has completed a study programme (a degree programme, a major or a specific curriculum within a degree programme) for which the collaborating institutions are jointly responsible;
- l. OLC: programme committee
- m. period: a part of a semester
- n. practical exercise: the participation in a practical training or other educational learning activity, aimed at acquiring certain (academic) skills. Examples of practical exercises are:
- researching and writing a thesis or dissertation
 - carrying out a research assignment

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| | <ul style="list-style-type: none"> o taking part in fieldwork or an excursion o taking part in another educational learning activity aimed at acquiring specific skills, or o participating in and completing a work placement; |
| o. premaster student | those who enroll in a premaster programme; |
| p. programme: | the totality and cohesion of the course components, teaching activities/methods, contact hours, testing and examination methods and recommended literature; |
| q. SAP/SLM: | the student information system (<i>Student Lifecycle Management</i>); |
| r. semester: | the first (September - January) or second half (February - August) of an academic year; |
| s. study guide: | the guide for the study programme that provides further details of the courses, provisions and other information specific to that programme. The Study Guide is available electronically at: https://www.vu.nl/en/study-guide/ ; |
| t. subject | see 'educational component'; |
| u. substituting course/educational component | see under d (double degree programme). A course obtained at the educational institute, within the context of cooperation, that is mentioned in the diploma supplement as such; not being an 'exemption'. |
| v. thesis: | a component comprising research into the literature and/or contributing to scientific research, always resulting in a written report; |
| w. thesis/internship research/ | conducting own research, followed by the final report research project |
| x. university: | Vrije Universiteit Amsterdam; |
| y. WHW: | the Dutch Higher Education and Research Act (<i>Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek</i>); |
| z. workload: | the workload of the unit of study to which an interim examination applies, expressed in terms of credits = EC credits (ECTS = European Credit and Transfer Accumulation System). The workload for 1 year (1,680 hours) is 60 EC credits. |

The other terms have the meanings ascribed to them by the WHW.

2. Study programme structure

Article 2.1 Structure of academic year and educational components

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| 1. The study programme will be offered in a year divided into two semesters. | Ordinance CvB, see appendix 3 |
| 2. Every semester consists of three consecutive periods of eight, eight and four weeks | Ordinance CvB, see appendix 3 |
| 3. An educational component comprises 6 EC or a multiple thereof. | Ordinance CvB, see appendix 3 |
| 4. By way of exception to paragraph 3, Section B may stipulate that a unit of study comprises 3 EC or a multiple thereof. The Executive Board has to give permission for this. | Ordinance CvB, see appendix 3 |

Article 2.2 Frame study programme

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| 1. The programme consists in any case of the following components: a. Academic development of at least 24 EC b. Major/compulsory components of at least 90 EC c. Elective components of study of at least 30 EC The bachelor programme may entail practical exercises, further specified in Section B. | Ordinance CvB, see appendix 3 |
| 2. In the first year of the programme, the programme will offer at least fourteen contact hours a week. | Ordinance CvB, see appendix 3 |
| 3. In the second and third years of the programme, the programme will offer at least twelve contact hours a week. | Ordinance CvB, see appendix 3 |

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| 4. Internationalization is included as part of the Bachelor's programme and reflected in or more educational components, such as to gain knowledge and experience in collaboration and teamwork skills, the ability to work in an international, multidisciplinary team, to follow English taught courses at the Vrije Universiteit Amsterdam or abroad. | Ordinance CvB, see appendix 3 |
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Article 2.3 Refusal or termination of registration / (iudicium abeundi)

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| 1. Pursuant to the provisions of Article 7.42a of the Act, the Faculty Board or the Examination Board may, in exceptional circumstances, request the Executive Board to terminate or refuse a student's registration on a programme. This may be the case if the student's conduct or statements demonstrate his or her unsuitability to work in the relevant field or discipline, or to take part in the programme's practical training component. | WHW |
| 2. If a student is suspected of being unsuitable as described in paragraph 1, the Examination Board or the Faculty Board will examine the case, and the student will be informed of this immediately. The Examination Board or the Faculty Board will only issue a recommendation after careful consideration of the interests involved and following a hearing with the student concerned. | WHW |

3. Assessment and Examination

Article 3.1 Signing up for education and interim examinations

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| 1. Every student must sign up to participate in the educational components of the programme, the examinations and resits. The procedure for signing up is described in an annex to the Student Charter. | Ordinance CvB, see appendix 3 |
| 2. Signing up may only take place in the designated periods. | Ordinance CvB, see appendix 3 |
| 3. If a student fails both the exam and the resit, the student must repeat the entire unit of study. This rule does not apply to practical exercises and programmes that make use of component marks that retain their validity. For further regulations, see Section B of the programme involved. | Advice OLC, approval FGV, (art. 7.13 x) |
| 4. Paragraph 1 and 2 shall apply mutatis mutandis to the premaster student. | |

Article 3.2 Type of examination

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| 1. At the student's request, the Examinations Board may permit a different form of interim examination than that stipulated in the course catalogue. If applicable, more detailed regulations on this are included in the Rules and Guidelines for the Examination Board. | Advice OLC, Approval FGV (7.13 l) |
| 2. In the case of a unit of study that is no longer offered, in the academic year following its termination, at least one opportunity will be provided to sit the interim examination(s) or parts thereof and a transitional arrangement will be included in the programme-specific section for the subsequent period. | Advice OLC, approval FGV (7.13 j) |
| 3. Paragraph 1 and 2 shall apply mutatis mutandis to the premaster student. | |

Article 3.3 Oral interim examinations

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| 1. An oral assessment is public unless the Examinations Board on request determines otherwise. | Advice OLC; approval FGV (7.13 l and n) |
| 2. An oral examination will be taken in the presence of a second examiner. | Advice OLC; approval FGV (art. 9.38 par. b) |
| 3. Paragraph 1 and 2 shall apply mutatis mutandis to the premaster student. | |

Article 3.4 Determining and announcing results

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| 1. The examiner determines the result of a written interim examination as soon as possible, but at the latest within fifteen working days. Notwithstanding the provisions in the previous sentence, the following also applies: a. The assessment period for a thesis and/or final assignments may not exceed twenty working days. | Ordinance CvB, see appendix 3 |
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| <p>b. The assessment period in the first year of the programme is not to exceed ten working days in conjunction with the Binding Study Advice (BSA).</p> <p>The examiner will then immediately ensure that the marks are registered and also ensures that the student is immediately notified of the mark, taking due account of the applicable confidentiality standards.</p> | |
| <p>2. a. The examiner determines the result (i.e. mark) of an oral examination as soon as possible, though within one working day, after the examination has finished and informs the student accordingly. The third clause of the first paragraph applies.</p> <p>b. The examiner will determine the result of the partial examination at least five working days prior to the next (partial) examination opportunity.</p> | Advice OLC; approval FGV (7.13 o) |
| <p>3. In the case of alternative forms of oral or written examinations, the Examinations Board determines in advance how and by what deadline the student will be informed of the results.</p> | Advice OLC; approval FGV (7.13 o) |
| <p>4 A student can submit a request for reassessment to the examiner. A request for reassessment does not affect the time period for lodging an appeal.</p> | Advice OLC; approval FGV (9.38 sub b) |
| <p>5. Together with the result of an examination, the student's attention will also be drawn to their right to inspect the assessed work and have a post-examination discussion as stipulated in article 3.9 (TER), as well as his/her right to lodge a complaint before the Examination Board, and if necessary, to appeal to the Examination Appeals Board (in Dutch: COBEX).</p> | |
| <p>6. Paragraph 1 shall apply mutatis mutandis to the premaster student, with the exception of provisions under a) and b).</p> | |

Article 3.5 Examination opportunities

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| <p>1. a. Per academic year, two opportunities to take examinations per educational component will be offered.</p> <p>b. The options for retaking practical components, work placements and theses are detailed in the relevant work placement manual, teaching regulations or graduation regulations.</p> | Ordinance CvB, see appendix 3 |
| <p>2. The most recent mark will apply in the event of a resit. A retake is allowed for both passed and failed units of study.</p> | Ordinance CvB, see appendix 3 |
| <p>3. The resit for a (partial) interim examination must not take place within ten working days of the announcement of the result of the (partial) examination being resat.</p> | Advice OLC; approval FGV (7.13 j) |
| <p>4. The Examination Board may allow a student an extra opportunity to sit an examination if that student:</p> <p>a) is lacking only those credits to qualify for his or her degree;</p> <p>b) has failed the examination during all the previously offered attempts, unless participation in an examination was not possible for compelling reasons.</p> <p>The extra opportunity can only be offered if it concerns a written examination, a paper or a take home examination. This provision excludes the practical assignments and the Bachelor's thesis. Requests for an additional examination opportunity must be submitted to the Examination Board no later than 15 July. If necessary, the method of examination may deviate from the provisions in the study guide.</p> | Ordinance CvB, see appendix 3 |
| <p>5. This article shall apply mutatis mutandis to the premaster student.</p> | |

Article 3.6 Marks

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| <p>1. Marks are given on a scale from 1 to 10 with no more than one decimal point.</p> | Ordinance CvB, see appendix 3 |
| <p>2. The final marks are given in whole or half points.</p> | Ordinance CvB, see appendix 3 |
| <p>3. Final marks between 5 and 6 will be rounded off to whole marks: up to 5.5 rounded down; from 5.5 rounded up. To pass a course, a 6 or higher is required.</p> | Ordinance CvB, see appendix 3 |

| <p>In case the examination of a component consists of two or more parts, each of which are graded separately, the (weighted) mean of these marks (meaning: the final mark) must be rounded off using the following table:</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-------------------------------|-------|-------|------|------|---|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|----|--|
| <table border="1"> <thead> <tr> <th>From</th> <th>Up to</th> <th>Grade</th> </tr> </thead> <tbody> <tr><td>1,00</td><td>1,25</td><td>1</td></tr> <tr><td>1,25</td><td>1,75</td><td>1,5</td></tr> <tr><td>1,75</td><td>2,25</td><td>2,0</td></tr> <tr><td>2,25</td><td>2,75</td><td>2,5</td></tr> <tr><td>2,75</td><td>3,25</td><td>3,0</td></tr> <tr><td>3,25</td><td>3,75</td><td>3,5</td></tr> <tr><td>3,75</td><td>4,25</td><td>4,0</td></tr> <tr><td>4,25</td><td>4,75</td><td>4,5</td></tr> <tr><td>4,75</td><td>5,50</td><td>5,0</td></tr> <tr><td>5,50</td><td>6,25</td><td>6,0</td></tr> <tr><td>6,25</td><td>6,75</td><td>6,5</td></tr> <tr><td>6,75</td><td>7,25</td><td>7,0</td></tr> <tr><td>7,25</td><td>7,75</td><td>7,5</td></tr> <tr><td>7,75</td><td>8,25</td><td>8,0</td></tr> <tr><td>8,25</td><td>8,75</td><td>8,5</td></tr> <tr><td>8,75</td><td>9,25</td><td>9,0</td></tr> <tr><td>9,25</td><td>9,75</td><td>9,5</td></tr> <tr><td>9,75</td><td>10,0</td><td>10</td></tr> </tbody> </table> | | From | Up to | Grade | 1,00 | 1,25 | 1 | 1,25 | 1,75 | 1,5 | 1,75 | 2,25 | 2,0 | 2,25 | 2,75 | 2,5 | 2,75 | 3,25 | 3,0 | 3,25 | 3,75 | 3,5 | 3,75 | 4,25 | 4,0 | 4,25 | 4,75 | 4,5 | 4,75 | 5,50 | 5,0 | 5,50 | 6,25 | 6,0 | 6,25 | 6,75 | 6,5 | 6,75 | 7,25 | 7,0 | 7,25 | 7,75 | 7,5 | 7,75 | 8,25 | 8,0 | 8,25 | 8,75 | 8,5 | 8,75 | 9,25 | 9,0 | 9,25 | 9,75 | 9,5 | 9,75 | 10,0 | 10 | |
| From | Up to | Grade | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,00 | 1,25 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,25 | 1,75 | 1,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2,75 | 3,25 | 3,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 4,75 | 5,50 | 5,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5,50 | 6,25 | 6,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6,25 | 6,75 | 6,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6,75 | 7,25 | 7,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7,25 | 7,75 | 7,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7,75 | 8,25 | 8,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8,25 | 8,75 | 8,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8,75 | 9,25 | 9,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9,25 | 9,75 | 9,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9,75 | 10,0 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | The Examination Board can allow using symbols rather than numbers, such as: pass, fail, (un)satisfactory, good, VRS (exemption). In case a student does not take part in any (interim) examination, the examiner will register the mark 'ns' (c.q. no show). | Ordinance CvB, see appendix 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | This article shall apply mutatis mutandis to the premaster student. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Article 3.7 Exemption

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| 1. | At the written request of the student, the Examination Board may exempt the student from taking one or more examination components, if the student: <ul style="list-style-type: none"> a) has passed a course component of a university or higher professional education programme that is equivalent in terms of content and level; b) has demonstrated through his/her work and/or professional experience that he/she has sufficient knowledge and skills with regard to the relevant course component. The Examination Board will make a decision within six weeks after receiving the request. | Advice OLC; approval FGV (7.13 r) |
| 2. | A maximum of 60 EC of the curriculum can be accumulated through granted exemptions for the one three-year bachelor programme. The substituting courses (educational components) are not included. | Advice OLC; approval FGV (art. 7.13 r WHW jo art. 9.38 sub b) |
| 3. | The Bachelor's thesis is excluded from this exemption possibility. | Advice OLC; approval FGV (9.38 sub b) |

Article 3.8 Validity period for results

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| 1. | The validity period of interim examinations passed and exemption from interim examinations is unlimited, unless otherwise specified in Section B. | Legal provision |
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| 2. The validity period of a partial examination is limited to the academic year in which it was sat or until the end of the unit of study concerned, as stipulated for the relevant unit of study in Section B. | Advice OLC; approval FGV (9.38 sub b) |
| 3. In exception to paragraphs 1 and 2 the results of the premaster programme remain valid until 1 September 2020. | Advice OLC; approval FGV (art. 9.38 par. b) |

Article 3.9 Right of inspection and post-examination discussion

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| 1. For at least twenty working days after the announcement of the results of a written interim examination, the student can, on request, inspect his/her assessed work, the questions and assignments set in it, as well as the standards applied for marking. The place and time referred to in the previous clause will be announced at the time of the interim examination on VUnet or Canvas. | Advice OLC; approval FGV (7.13 p en q) |
| 2. If a collective post-examination discussion has been organized, individual post-examination discussions will be held only if the student has attended the collective discussion or if the student was unable to attend the collective discussion through no fault of his or her own. | Advice OLC; approval FGV (7.13 q) |
| 3. Students who meet the requirements stipulated in paragraph 1 can submit a request for an individual post-examination discussion to the relevant examiner. The discussion shall take place at a time and location to be determined by the examiner. | Advice OLC; approval FGV (7.13 p en q) |
| 4. This article shall apply mutatis mutandis to the premaster student. | |

Article 3.10 Fraud and plagiarism

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| 1. The provisions of the Rules and Guidelines for the Examination Board apply in full. | Ordinance CvB |
| 2. Electronic detection software programmes may be used to detect plagiarism in texts. In submitting a text, the student implicitly consents to the text being saved in the database of the detection programme concerned. | Ordinance CvB |

4. Honours programme

Article 4.1 Honours programme

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| 1. Vrije Universiteit Amsterdam offers an honoursprogramme for students who meet the admission requirements. As to participate in the Honours programme, the student can apply online, or otherwise may be appointed by the programme director. The Honours programme consists of educational components taken in addition to the standard curriculum. | Ordinance CvB, see appendix 3 |
| 2. The honoursprogramme comprises 30 EC, a minimum of 12 EC of which consist of faculty honourscomponents and a minimum of another 12 EC consist of interfaculty honourscomponents. The choices available to the student will be published via the website (www.vu.nl/nl/opleidingen/overig-onderwijs/honours-programme/index.aspx) and/or the study guide. | Ordinance CvB, see appendix 3 |
| 3. For admission to the honoursprogramme, the student must have secured all credits from the first year and have been awarded a weighted average mark of at least a 7.5. | Ordinance CvB, see appendix 3 |
| 4. A student who has met the requirements of the regular Bachelor's programme within the nominal duration of study, who has achieved an average weighted mark of at least 7.5 for all components of the Bachelor's programme (excluded the honourscomponents) and who has also met the requirements of the honoursprogramme will receive a Bachelor diploma with a transcript indicating that he or she has successfully completed the honoursprogramme. | Ordinance CvB, see appendix 3 |
| 5. In order to prevent significant unfairness, the Examination Board may deviate from the provisions of paragraphs 3 and 4. | (See art. 6.1.) Advice OLC; approval FGV (9.38 sub b) |

5. Academic student counselling, advice regarding continuation of studies and study progress

Article 5.1 Administration of study progress and academic student counselling

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| 1. The faculty board is responsible for the correct registration of the students' study results. After the assessment of an educational component has been registered, every student has the right to inspect the result for that component and also has a list of the results achieved at his/her disposal in VUnet. | Advice OLC; approval FGV (7.13 u) |
| 2. Enrolled students are eligible for academic student counselling. Academic student counselling is provided by a. The Student General Counselling Service b. Student psychologists c. Faculty academic advisors | Advice OLC; approval FGV (7.13 u) |
| 3. This article shall apply mutatis mutandis to the premaster students. | |

Article 5.2 Advice regarding continuation of studies

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| 1. The faculty board will issue every student on a full-time Bachelor's programme with a recommendation on continuation of his or her studies, at the end of the first year of study. The recommendation on continuation of studies is issued on behalf of the faculty board by the faculty BSA committee | Ordinance CvB, see appendix 3 |
| 2. Prior to 1 February, the student will receive an overview of his or her results. | Ordinance CvB, see appendix 3 |
| 3. A student who has not completed enough EC, will receive a warning stating that sufficient improvement is necessary to reach the standard for a positive recommendation on continuation of studies at the end of the academic year and will be advised to plan a meeting with an academic advisor. The purpose of this meeting will be to discuss the study methods, to review the choice of the bachelor programme, to discuss, if any, personal circumstances, and if necessary, a referral. | Advice OLC (7.13 f) |
| 4. If the recommendation contains a rejection ('negative recommendation on continuation of studies') the provisions of Article 5.3 apply. | Advice OLC (7.13 f) |
| 5. A recommendation will not be issued if the student terminates his or her enrolment before 1 February of his/her first academic year. | Advice OLC (7.13 f) |

Article 5.3 Binding (negative) recommendation on continuation of studies (BSA)

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| 1. The recommendation issued at the end of the academic year will contain a binding rejection if the student has not achieved the standard required for positive recommendation on continuation of studies. The standard required for a positive recommendation is 42 EC. Recommendation on continuation of studies will not be issued if the student demonstrates that he/she did not meet the standard as described in Section 2.1 of the Implementation Regulation of the Higher Education and Research Act. | Ordinance CvB, see appendix 3 |
| 2. As soon as possible after the last resits of the second semester of the first year, a student who has not met the standard will be informed that the faculty board intends to issue him or her with negative binding recommendation on continuation of studies. The same procedure applies in the next year of enrolment if the student was permitted to continue with his/her study programme as a result of personal circumstances and has still not successfully met all of the requirements of the first year of study by that time. No recommendation will be issued to the student if he or she demonstrates that he or she again did not meet the standard as a consequence of personal circumstances. | Ordinance CvB, see appendix 3 |
| 3. Along with the information referred to in the previous paragraph, the student will also be informed of the possibility of being heard by the BSA committee and of how he or she can apply for such a hearing. | Ordinance CvB, see appendix 3 |
| 4. As soon as possible (no more than 10 working days) after the hearing and on the advice of the BSA committee, the faculty board will determine which students will be issued with a negative binding recommendation on continuation of studies. | Ordinance CvB, see appendix 3 |

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| 5. Students may lodge an appeal against a decision on a binding negative recommendation on continuation of studies with the Examination Appeals Board of Vrije Universiteit Amsterdam within six weeks of the day of the decision's announcement. | Ordinance CvB, see appendix 3 |
| 6. Students who receive a binding negative recommendation on continuation of studies may therefore not enroll in the same (or very similar) Bachelor's programme for the next three academic years. If applicable, further provisions concerning the related educational programmes are stipulated in Section B. | Ordinance CvB, see appendix 3 |

Article 5.4 Personal circumstances

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| 1. The faculty board will not include a rejection in the binding recommendation on the continuation of studies in the case of personal circumstances, as a result of which the student concerned cannot have been reasonably expected to have met the BSA standard. | Advice OLC (7.13 f) |
| 2. If a circumstance, as described in Section 2.1 of the Implementation Regulation of the Higher Education and Research Act, should occur, the student must notify the academic adviser office as soon as possible, providing details of: <ol style="list-style-type: none"> the period in which the circumstance occurs or occurred; a description of the circumstance and its seriousness; the extent to which he or she cannot or could not participate in instruction/classes or an interim examination. It is the student's responsibility to submit documentary evidence to substantiate his or her report. | Advice OLC (7.13 f) |
| 3. If required, the academic advisor may advise the BSA Committee on the extent to which personal circumstances have influenced the student's study progress. | Advice OLC (7.13 f) |

Article 5.5 Adaptations for students with a disability

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| 1. A student with a disability can, at the moment of submission to VU.net, or at a later instance, submit a request to qualify for special adaptations with regard to teaching, practical training and interim examinations. These adaptations will accommodate the student's individual disability as much as possible, but may not alter the quality or degree of difficulty of a unit of study or an examination. In all cases, the student must fulfil the exit qualifications for the study programme. | Advice OLC; approval FGV (7.13 m) |
| 2. The request referred to in the first paragraph must be accompanied by a statement from a doctor or psychologist. If possible, an estimate should be given of the potential impact on the student's study progress. In case of a chronic disability a single (one time) request suffices. | Advice OLC; approval FGV (7.13 m) |
| 3. Students who have been diagnosed with dyslexia must provide a statement from a BIG, NIP or NVO registered professional who is qualified to conduct psychological evaluation. | Advice OLC; approval FGV (7.13 m) |
| 4. The faculty board, or on behalf of the faculty board, the educational director, or the programme director, decides on the adaptations concerning the teaching facilities and logistics. The Examinations Board will rule on requests for adaptations with regard to examinations. | Advice OLC; approval FGV (7.13 m) |
| 5. In the event of a positive decision in response to a request as referred to in paragraph 1, the student will make an appointment with the study adviser to discuss the details of the provisions. | Advice OLC; approval FGV (7.13 m) |
| 6. A request for adaptations will be refused if it would place a disproportionate burden on the organization or the resources of the faculty or university were it upheld. | Advice OLC; approval FGV (7.13 m) |
| 7. If the disability justifies an extension of the interim examination time, the Examination Board will grant permission testifying to this entitlement to an extension. If a disability justifies other measures to be taken, the Examination Board will advise the Faculty Board on the necessary measures to be taken. | Advice OLC; approval FGV (7.13 m) |
| 8. The decision as referred to in paragraph 7, is valid for a maximum period of one year with the exception for the chronic diseases and disabilities. | Advice OLC; approval FGV (7.13 m) |
| 9. This article shall apply mutatis mutandis to the premaster student, with the exception of | |

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| provision concerning the fulfilment of the exit qualifications for the study programme mentioned in par. 1. | |
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6. Hardship clause

Article 6.1 Hardship clause

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| 1. In instances not regulated by the Teaching and Examination Regulations or in the event of demonstrable extreme unreasonableness and unfairness, the faculty board responsible for the study programme will decide, unless the matter concerned is the responsibility of the Examinations Board. | Advice OLC; approval FGV (9.38 sub b) |
| 2. This article shall apply mutatis mutandis to the premaster student. | |

Article 6.2. Publication

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| 1. The faculty board will ensure the appropriate publication of these Regulations and any amendments to them. | WHW |
| 2. The Teaching and Examination Regulations will be posted in the study guide or on VUnet. | WHW |

Approved by authorized representative advisory body FGOV of the Faculty of Science on 3 September 2019.

Adopted by the Faculty Board on 30 August 2019.

Section B1: Programme specific – general provisions

7. General programme information and characteristics

Article 7.1 Study programme information

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| 1. | The programme Artificial Intelligence (CROHO number 56945) is offered on a full- time basis. | Advice OLC; approval FGV (7.13 i) |
| 2. | The language of instruction is English. | Advice OLC; approval FGV (9.38 b) |

Article 7.1a. Deviant size of educational component

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| By way of derogation from art. 2.1 par. 3, the units listed below have deviant size: | | | Approval OLC (art. 7.13 lid 2, under e), approval CvB | |
| x | Course code | Course component | | EC |
| x | L_ETBAALG006 | Academic Writing (BETA) | | 3 EC |
| x | X_400475 | Computational Thinking | | 3 EC |
| x | X_400318 | History of Science | | 3 EC |
| x | X_401089 | Introduction to Artificial Intelligence | | 3 EC |
| x | X_400433 | Philosophy | | 3 EC |
| x | XB_40002 | Bachelor Project Artificial Intelligence | | 15 EC |

Article 7.2 Teaching formats used and modes of assessment

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| 1. | The programme uses the teaching formats as specified in the Study Guide. | Advice OLC; approval FGV (7.13 x) |
| 2. | The modes of assessment used per educational component are specified in the Study Guide. | Advice OLC; approval FGV (7.13 l) |

8. Further admission requirements

Article 8.1 Additional previous education requirements

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| 1. | Students who do not meet the previous education requirement as stipulated in 'Regulations on Additional Prior Education Requirements for Higher Education' (Ministry of Education Culture and Science) currently in force may still be admitted to the programme by successfully completing the following exams: <ol style="list-style-type: none"> Mathematics A equivalent to final-examination university entry level (VWO), and; A command of English equivalent to pre-university final-exam level (VWO) | Exception in WHW: advice OLC |
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Article 8.2 Colloquium doctum (entrance examination)

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| 1. | Persons aged 21 years and older who do not meet the requirements for previous education can submit a request to the Executive Board to take an entrance examination (colloquium doctum), as stipulated in Section 7.29 of the WHW. The entrance examination concerns the following subjects at final pre-university examination level: <ol style="list-style-type: none"> Mathematics A equivalent to final-examination university entry level (VWO), and; A command of English equivalent to pre-university final-exam level (VWO); Evaluation with two members of staff. | Advice OLC; approval FGV (9.38 b) |
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| 2. Students who do not meet the previous education requirements but have successfully completed the first year of a higher professional education programme (HBO) can gain admission to the programme by demonstrating that their level of mathematics is comparable to Mathematics B as taught in Dutch pre-university secondary school programmes. The Admission Board will assess whether these conditions have been met. | Advice OLC approval FGV (9.38 b) |
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| These conditions include a sufficient command of the language of tuition. | |
| 3. The proof that the entrance examination has been passed, only provides entitlement to admission to the intended programme or programmes for the academic year after the examination was taken. | Advice OLC; approval FGV (9.38 b) |

9. Interim examinations and results

Article 9.1 Sequence of interim examinations

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| 1. Students may participate in interim examinations or practical exercises of the components below only if they have passed the interim examination or examinations for the components mentioned hereinafter: <i>x Not Applicable.</i> | Advice OLC; approval FGV (7.13 h, 7.13 s/t) |
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Article 9.2 Validity period for results

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| 1. As laid down in article 3.8. of Teaching and Examination Regulations, part A of the Faculty of Sciences. No further rules applicable. | Advice OLC; approval FGV (7.13 k) |
| 2. A student may request the Examination Board to extend the validity of an exam. If the exam shows that a student's knowledge is insufficient or outdated, or if the student's skills and insights evaluated in the exam are demonstrably outdated, the Examination Board may impose a supplementary examination, impose a replacement examination or refuse to extend the period of validity. | Legal provision |
| 3. In situations where a limited period of validity applies, the period of validity of examinations may be extended in the event of extenuating circumstances as stipulated in WHW Article 7.51, paragraph 2, with at least the period of allocated financial assistance specified in WHW Article 7.15, paragraph 1. | Legal provision |

Article 9.3. Degree

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| Students who have successfully completed the final examination and met all other requirements stipulated in the WHW will be given the degree of Bachelor of Science, abbreviated to BSc. The degree awarded is stated on the diploma. | Legal provision |
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Section B2: Programme specific – content of programme

10. Programme objectives, specializations and exit qualifications

Article 10.1 Programme objective

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| <p>The objective of the bachelor Artificial Intelligence is to provide students with a suitable basis (theoretical and practical) for a further career, both in education as well as in employment in the broad field of Artificial Intelligence. The bachelor must be prepared for a number of different roles and opportunities.</p> <p>The bachelor provides the student with the specific knowledge and abilities, exemplified in the form of a bachelor's diploma that allows the bachelor to apply for any master's programme in Artificial Intelligence or other national or international master's programmes, particularly in related disciplines.</p> <p>The bachelor prepares for a position in which the student can earn his or her own subsistence. In particular it prepares for:</p> <ul style="list-style-type: none"> • Supervised work on a national and international academic level; • Positions in the modern high-tech society, such as functions in knowledge intensive companies and knowledge intensive parts of the non-profit sector. <p>The bachelor provides sufficient training in (scientific) reasoning, conduct, and communication to reach internationally accepted standards of academic skills at that level.</p> <p>The bachelor's programme provides the bachelor with the knowledge and tools needed to form an informed opinion of the meaning and impact of Artificial Intelligence, and an informed notion of the responsibilities of a specialist in this area.</p> | <p>Advice OLC; (7.13 a)</p> |
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Article 10.2 Majors (specializations)

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| <p>The programme has the following majors:</p> <ol style="list-style-type: none"> 1. Intelligent Systems; 2. Socially Aware Computing. | <p>Advice OLC; (7.13 a)</p> |
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Article 10.3 Exit qualifications

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| <p>The objectives of the Bachelor can be specified into final qualifications. To comply with international standards, these qualifications are presented below in terms of the Dublin descriptors.</p> <p>At all events, a graduate of the study programme will have knowledge and understanding in the field of:</p> <p>A. Knowledge and Understanding</p> <p>The bachelor demonstrates knowledge and understanding in a field of study that builds upon and supersedes their general secondary education. Knowledge and understanding is typically at a level at which the bachelor, whilst supported by advanced textbooks, is able to include some aspects at the forefront of their field of study.</p> <p>We distinguish two levels of qualification: a basic understanding, corresponding to</p> | <p>Approval OLC (7.13 c)</p> |
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knowledge of the essentials and fundamentals of the field in question, such as knowing what the field is, knowing how to apply knowledge in said field, and knowing how to further develop oneself in the field in question, and an advanced understanding, corresponding to in-depth knowledge about a topic in question.

Qualifications:

1. Basic understanding of all (8) key areas of Artificial Intelligence. The 8 key areas are:
 - a) (Cognitive) Psychology;
 - b) Computational Linguistics;
 - c) Context of Artificial Intelligence (History, Philosophy, Ethics);
 - d) Intelligent Autonomous Agents and Multi-Agent Systems;
 - e) Interaction (Human-Computer Interaction, Communication);
 - f) Knowledge Representation and Reasoning;
 - g) Machine Learning;
 - h) Problem Solving (Search, Decision Making, Optimization).
2. For each of the two tracks, a different type of advanced knowledge is expected up to a level that without further requirements grants access to the VU master programme in Artificial Intelligence, as well to master programmes in Artificial Intelligence and related areas (e.g. Behavioral Science, Cognitive Science, Computational Science, Information Sciences and Computer Science) offered at other universities.
 - a) **Track Socially aware computing:** advanced understanding of and insight in the field of hybrid artificial intelligence (interplay of artificial and human intelligence), including the required background knowledge of socially aware artificial intelligence and ambient intelligence. The student has basic knowledge of physiological, psychological, or social aspects of human functioning that can be exploited in socially aware artificially Intelligent systems.
 - b) **Track Intelligent Systems:** advanced knowledge of at least one of the key areas in AI that are specific to the construction and evaluation of Intelligent Systems (particularly, but not exclusively 1b, d, e, f, g, h).

B. Applying Knowledge and Understanding

Bachelors can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems and/or designing systems within their field of study. They are able to analyze, model and solve *prototypical* Artificial Intelligence problems by using *known* Artificial Intelligence methods and techniques.

Qualifications:

1. The ability to understand, apply, formulate, and validate models from the domains of Artificial Intelligence;
2. The ability to apply knowledge from the key areas of Artificial Intelligence. (as outlined in 10.3.1);
3. The ability to apply knowledge from the disciplines Computer Science, Logic and Mathematics to a level that is required to master the core AI knowledge and skills;
4. Analytical approach to problem solving and design:
 - a) Ability to comprehend (design) problems and abstract their essentials;

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| <p>b) Ability to construct and develop logical arguments with clear identification of assumptions and conclusions.</p> <ol style="list-style-type: none"> 5. The ability to submit an argument in the exact sciences to critical appraisal; 6. Analytical and critical way of thought and ability to apply logical reasoning; 7. Openness to interdisciplinary cooperation and ability to effectively participate therein as an academic professional; 8. The ability to create an effective project plan for solving a prototypical Artificial Intelligent problem in a realistic/real life context. 9. Manage one's own learning and development, including time management and organizational skills. 10. The ability to transpose academic knowledge and expertise into (inter)national social, professional and economic contexts. 11. Readiness to address new problems in new areas, emerging from scientific and professional fields. <p>C. Making Judgements</p> <p>The bachelor has the ability to gather and interpret relevant data (typically within the field of study) and to formulate judgments that include reflection on relevant social, academic or ethical issues.</p> <p>Qualifications:</p> <ol style="list-style-type: none"> 1. Ability to critically review results, arguments and problem statements from accepted perspectives in the field of Artificial Intelligence and neighboring disciplines; 2. Initial competence in search and critical processing of professional literature in Artificial Intelligence; 3. Acquaintance with the standards of academic criticism; 4. Awareness of, and responsible concerning, the ethical, normative and social consequences of developments in science and technology, particularly resulting from Artificial Intelligence. <p>D. Communication</p> <p>The bachelor can communicate information, ideas, problems and solutions to audiences of both domain-specialist and a general audience.</p> <p>Qualifications:</p> <ol style="list-style-type: none"> 1. Academically appropriate communicative skills; the bachelor can: <ol style="list-style-type: none"> a) Communicate ideas effectively in written form and through the use of Information and Communication Technology; b) Make effective oral presentations, both formally and informally; c) Understand and offer constructive critiques of the presentations of others. <p>E. Learning Skills</p> <p>The bachelor has developed those learning skills that are necessary for a successful further study characterized by a high degree of autonomy (typically in the context of a master or a specialist profession).</p> <p>Qualifications:</p> | |
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| 1. Reflection on one's own style of thought and working methods and readiness to take the necessary corrective action; | |
| 2. Recognise the need for continued learning throughout a professional career. | |

Article 10.4 Language test

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| 1. At the start of the first year of study every student must complete a diagnostic language test (AB_ELT) in the language of instruction of his or her programme. | Advice OLC; (7.13 a) |
| 2. Any student who does not achieve a pass in the language test must take the 'Refresher Course' organized by the Language Desk (Taalloket). | Approval OLC (7.13 c) |
| 3. The language test is part of the following educational component: B Artificial Intelligence (year 1). A mark can only be determined if the student has successfully completed the requirements of the educational component, including a pass in the language test or completing the Refresher Course. | Approval OLC (7.13 c) |

11. Curriculum structure

Article 11.1 Academic development

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| 1. Academic development is part of the study programme. This includes: | Ordinance CvB, see appendix 3 |
| (1) Academic skills/critical reasoning | |
| L_ETBAALG006 Academic Writing (BETA) 3 | |
| (2) Methods & techniques | |
| X_401096 Intro to Programming (Python) 6 | |
| X_401020 Statistical Methods 6 | |
| (3) Philosophical training | |
| X_400318 History of Science 3 | |

Article 11.2 Major

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| 1. The major comprises a package of compulsory and possibly optional units of study. | Ordinance CvB, see appendix 3 |
| 2. In addition, units of study are categorized as introductory (100), in-depth (200) and advanced (300) level. | Ordinance CvB, see appendix 3 |

Article 11.3 Compulsory educational components of the major

A detailed description per educational component can be found in the Study Guide.

| Name of educational component | course code | nr of E C | level | Advice OLC; (7.13 a) |
|---|--------------|--------------------|-------|----------------------------|
| Year 1 | | | | |
| Academic Writing (BETA) | L_ETBAALG006 | 3 | 100 | |
| Computational thinking | X_400475 | 3 | 100 | |
| History of Science | X_400318 | 3 | 200 | |
| Human-Computer Interaction | XB_0013 | 6 | 100 | |
| Intelligent Systems | XB_0031 | 6 | 100 | |
| Introduction to Programming (Python) | X_401096 | 6 | 100 | |
| Introduction to Artificial Intelligence | X_401089 | 3 | 100 | |

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|--|--------------|----|-----|--|
| Introduction Psychology Methods LI | P_BIPM_LI | 6 | 100 | |
| Logic and Sets | X_401090 | 6 | 100 | |
| Dynamic Modelling for Human-Centered Systems | XB_0036 | 6 | 100 | |
| Project Artificial Intelligence | X_401076 | 6 | 200 | |
| English Language Test | X_TAALTOETS | 0 | 100 | |
| Web Technology | X_400488 | 6 | 100 | |
| Year 2 | | | | |
| Databases | X_401008 | 6 | 200 | |
| Knowledge and Data | X_400083 | 6 | 300 | |
| Intelligent Systems | X_401086 | 6 | 200 | |
| Multi-Agent Systems | XB_0024 | 6 | 200 | |
| Linear Algebra | X_400649 | 6 | 200 | |
| Statistical Methods | X_401020 | 6 | 200 | |
| Study and career for AI | XB_0022 | 0 | 200 | |
| Year 3 | | | | |
| Bachelor project Artificial Intelligence | XB_40002 | 15 | 300 | |
| Philosophy | X_400433 | 3 | 200 | |
| Machine Learning | X_400154 | 6 | 300 | |
| Text Mining | L_PABAALG002 | 6 | 300 | |
| Track Intelligent Systems | | | | |
| Data Structures and Algorithms | X_400614 | 6 | 200 | |
| Machine Learning | X_400154 | 6 | 300 | |
| Computational Intelligence | XB_0025 | 6 | 200 | |
| Project Embodied AI | XB_0026 | 6 | 200 | |
| Track Socially Aware Computing | | | | |
| Dynamic Modelling for SAS | XB_0023 | 6 | 200 | |
| Cognitive Psychology AI | P_BCOGPSY | 6 | 100 | |
| AI in Health | XB_0020 | 6 | 200 | |
| AI in Health Project | XB_0021 | 6 | 200 | |

Article 11.4 Participation in practical exercise

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| The study guide specifies the requirements for each degree component, as well as component attendance requirements. | Approval OLC (7.13 d) |
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12. Electives

Article 12.1 Elective period

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| 1. The first semester of the third year of the curriculum comprises elective educational components. | Ordinance CvB, see appendix 3 |
| 2. For this elective period, the student can take: <ul style="list-style-type: none"> x a minor (a coherent package of related educational components); x individual choice of at least five educational components at the faculty or elsewhere, of which at least two (12 EC) must be at least level 300, and not more than one (6EC) at level 100. | Ordinance CvB, see appendix 3 |
| 3. Prior consent must be obtained from the Examination Board. | Ordinance CvB, see appendix 3 |

Article 12.2 Minors

| 1. The student who meets the admission requirements can take a 'University minor' without prior consent from the Examination Board. The 'University minors' are listed on the VU website. | Ordinance CvB, see appendix 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------------------|------------|-------|-------|-------------------------------|--|--|--|-----------------------|---------|---|-----|------------------------------|----------|---|-----|------------------------|----------|---|-----|--------------------|----------|---|-----|--------------------------|---------|---|-----|---|--|--|--|--|--|--|--|-----------------------|---------|---|-----|----------|----------|---|-----|------------------------------|----------|---|-----|--|--|--|--|----------|----------|---|-----|--------------------------------------|----------|---|-----|------------------------------|----------|---|-----|--|--|--|--|-----------------------|---------|---|-----|----------------------|---------|---|-----|------------------------|---------|---|-----|--------------------|----------|---|-----|-----------------------|----------|---|-----|--|----------|---|-----|---|--|--|--|------------------------------|----------|---|-----|----------|----------|---|-----|--------------|---------|---|-----|--|--|--|--|-----------------------|---------|---|-----|--------------------------------------|----------|---|-----|-------------------------------------|--|--|--|--|-------------|--|--|------------------------------|----------|---|-----|--------------------------------------|-----------|---|-----|------------------------------------|--|--|--|---|------------|---|-----|-----------------|----------|---|-----|--------------------------|-------|---|-----|-----------------------|----------|---|-----|----------------|---------|---|-----|---------------------------|--|--|--|------------|----------|---|-----|---------------------|
| <p>2. The student can take one of the following minors without prior consent from the Examination Board:</p> <table border="1"> <thead> <tr> <th>Minor / Courses</th> <th>Coursecode</th> <th>EC</th> <th>Level</th> </tr> </thead> <tbody> <tr> <td colspan="4">Minor Deep Programming</td> </tr> <tr> <td>Compiler Construction</td> <td>XB_0003</td> <td>6</td> <td>300</td> </tr> <tr> <td>Concurrency & Multithreading</td> <td>X_401031</td> <td>6</td> <td>400</td> </tr> <tr> <td>Equational Programming</td> <td>X_401011</td> <td>6</td> <td>300</td> </tr> <tr> <td>Secure programming</td> <td>XB_40005</td> <td>6</td> <td>300</td> </tr> <tr> <td>Requirements Engineering</td> <td>XB_0032</td> <td>6</td> <td>300</td> </tr> <tr> <td colspan="4">Minor Bioinformatics and Systems Biology</td> </tr> <tr> <td colspan="4"><i>HBO Bioinformatics / Biotechnology (X_MINBSB_HBO)</i></td> </tr> <tr> <td>Evolutionary Genetics</td> <td>AB_1022</td> <td>6</td> <td>300</td> </tr> <tr> <td>Calculus</td> <td>X_400617</td> <td>6</td> <td>100</td> </tr> <tr> <td>Mathematics Premaster Course</td> <td>X_432806</td> <td>6</td> <td>400</td> </tr> <tr> <td colspan="4"><i>Biomedical Sciences/ Biology / HLO (X_MINBSB_HLO)</i></td> </tr> <tr> <td>Calculus</td> <td>X_400617</td> <td>6</td> <td>100</td> </tr> <tr> <td>Introduction to Programming (Python)</td> <td>X_401096</td> <td>6</td> <td>100</td> </tr> <tr> <td>Mathematics Premaster Course</td> <td>X_432806</td> <td>6</td> <td>400</td> </tr> <tr> <td colspan="4"><i>Minor BSB electives (X_MINBSB_K1)</i></td> </tr> <tr> <td>Evolutionary Genetics</td> <td>AB_1022</td> <td>6</td> <td>300</td> </tr> <tr> <td>From Protein to Cell</td> <td>AB_1052</td> <td>6</td> <td>300</td> </tr> <tr> <td>Molecular Cell Biology</td> <td>AB_1053</td> <td>6</td> <td>300</td> </tr> <tr> <td>Knowledge and Data</td> <td>X_400083</td> <td>6</td> <td>300</td> </tr> <tr> <td>Information Retrieval</td> <td>X_400435</td> <td>6</td> <td>300</td> </tr> <tr> <td>Mechanics and thermodynamics in the cell</td> <td>X_422589</td> <td>6</td> <td>400</td> </tr> <tr> <td colspan="4"><i>X_MINBSB_LSI Life Style Informatics (12 EC required)</i></td> </tr> <tr> <td>Mathematics Premaster Course</td> <td>X_432806</td> <td>6</td> <td>400</td> </tr> <tr> <td>Calculus</td> <td>X_400617</td> <td>6</td> <td>100</td> </tr> <tr> <td>Biochemistry</td> <td>AB_1137</td> <td>6</td> <td>100</td> </tr> <tr> <td colspan="4"><i>Medical Natural Sciences (X_MINBSB_MNW)</i></td> </tr> <tr> <td>Evolutionary Genetics</td> <td>AB_1022</td> <td>6</td> <td>300</td> </tr> <tr> <td>Introduction to Programming (Python)</td> <td>X_401096</td> <td>6</td> <td>100</td> </tr> <tr> <td colspan="4"><i>Minor BSB compulsory courses</i></td> </tr> <tr> <td></td> <td>X_MINBSB_V1</td> <td></td> <td></td> </tr> <tr> <td>Principles of Bioinformatics</td> <td>X_401094</td> <td>6</td> <td>300</td> </tr> <tr> <td>Research Questions in Bioinformatics</td> <td>XB_401081</td> <td>6</td> <td>300</td> </tr> <tr> <td colspan="4">Minor Web Services and Data</td> </tr> <tr> <td>Strategic Management of Technology & Innov.</td> <td>E_BK3_SMTI</td> <td>6</td> <td>300</td> </tr> <tr> <td>Service Science</td> <td>X_401077</td> <td>6</td> <td>300</td> </tr> <tr> <td>Data Analytics & Privacy</td> <td>R_DAP</td> <td>6</td> <td>300</td> </tr> <tr> <td>Information Retrieval</td> <td>X_400435</td> <td>6</td> <td>300</td> </tr> <tr> <td>Data Wrangling</td> <td>XB_0014</td> <td>6</td> <td>300</td> </tr> <tr> <td colspan="4">Minor Data Science</td> </tr> <tr> <td>Calculus 1</td> <td>X_400635</td> <td>6</td> <td>100</td> </tr> </tbody> </table> | Minor / Courses | Coursecode | EC | Level | Minor Deep Programming | | | | Compiler Construction | XB_0003 | 6 | 300 | Concurrency & Multithreading | X_401031 | 6 | 400 | Equational Programming | X_401011 | 6 | 300 | Secure programming | XB_40005 | 6 | 300 | Requirements Engineering | XB_0032 | 6 | 300 | Minor Bioinformatics and Systems Biology | | | | <i>HBO Bioinformatics / Biotechnology (X_MINBSB_HBO)</i> | | | | Evolutionary Genetics | AB_1022 | 6 | 300 | Calculus | X_400617 | 6 | 100 | Mathematics Premaster Course | X_432806 | 6 | 400 | <i>Biomedical Sciences/ Biology / HLO (X_MINBSB_HLO)</i> | | | | Calculus | X_400617 | 6 | 100 | Introduction to Programming (Python) | X_401096 | 6 | 100 | Mathematics Premaster Course | X_432806 | 6 | 400 | <i>Minor BSB electives (X_MINBSB_K1)</i> | | | | Evolutionary Genetics | AB_1022 | 6 | 300 | From Protein to Cell | AB_1052 | 6 | 300 | Molecular Cell Biology | AB_1053 | 6 | 300 | Knowledge and Data | X_400083 | 6 | 300 | Information Retrieval | X_400435 | 6 | 300 | Mechanics and thermodynamics in the cell | X_422589 | 6 | 400 | <i>X_MINBSB_LSI Life Style Informatics (12 EC required)</i> | | | | Mathematics Premaster Course | X_432806 | 6 | 400 | Calculus | X_400617 | 6 | 100 | Biochemistry | AB_1137 | 6 | 100 | <i>Medical Natural Sciences (X_MINBSB_MNW)</i> | | | | Evolutionary Genetics | AB_1022 | 6 | 300 | Introduction to Programming (Python) | X_401096 | 6 | 100 | <i>Minor BSB compulsory courses</i> | | | | | X_MINBSB_V1 | | | Principles of Bioinformatics | X_401094 | 6 | 300 | Research Questions in Bioinformatics | XB_401081 | 6 | 300 | Minor Web Services and Data | | | | Strategic Management of Technology & Innov. | E_BK3_SMTI | 6 | 300 | Service Science | X_401077 | 6 | 300 | Data Analytics & Privacy | R_DAP | 6 | 300 | Information Retrieval | X_400435 | 6 | 300 | Data Wrangling | XB_0014 | 6 | 300 | Minor Data Science | | | | Calculus 1 | X_400635 | 6 | 100 | Advice OLC; (7.13a) |
| Minor / Courses | Coursecode | EC | Level | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Deep Programming | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Compiler Construction | XB_0003 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrency & Multithreading | X_401031 | 6 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equational Programming | X_401011 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Secure programming | XB_40005 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Requirements Engineering | XB_0032 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Bioinformatics and Systems Biology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>HBO Bioinformatics / Biotechnology (X_MINBSB_HBO)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Evolutionary Genetics | AB_1022 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calculus | X_400617 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mathematics Premaster Course | X_432806 | 6 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomedical Sciences/ Biology / HLO (X_MINBSB_HLO)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calculus | X_400617 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Introduction to Programming (Python) | X_401096 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mathematics Premaster Course | X_432806 | 6 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Minor BSB electives (X_MINBSB_K1)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Evolutionary Genetics | AB_1022 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| From Protein to Cell | AB_1052 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Molecular Cell Biology | AB_1053 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Knowledge and Data | X_400083 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Information Retrieval | X_400435 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mechanics and thermodynamics in the cell | X_422589 | 6 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>X_MINBSB_LSI Life Style Informatics (12 EC required)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mathematics Premaster Course | X_432806 | 6 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calculus | X_400617 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Biochemistry | AB_1137 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Medical Natural Sciences (X_MINBSB_MNW)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Evolutionary Genetics | AB_1022 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Introduction to Programming (Python) | X_401096 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Minor BSB compulsory courses</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X_MINBSB_V1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Principles of Bioinformatics | X_401094 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research Questions in Bioinformatics | XB_401081 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Web Services and Data | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strategic Management of Technology & Innov. | E_BK3_SMTI | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Service Science | X_401077 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data Analytics & Privacy | R_DAP | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Information Retrieval | X_400435 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data Wrangling | XB_0014 | 6 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Data Science | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calculus 1 | X_400635 | 6 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|----------------|---|-----|
| Data Wrangling | XB_0014 | 6 | 300 |
| Information Retrieval | X_400435 | 6 | 300 |
| Introduction to Data Science | XB_40018 | 6 | 200 |
| Data Analytics and Privacy | R_DAP | 6 | 300 |
| Minor Flexible | | | |
| Advanced Programming | X_400561 | 6 | 200 |
| Business Modeling and Requirements Eng. | X_401005 | 6 | 200 |
| Concurrency & Multithreading | X_401031 | 6 | 400 |
| Data Structures and Algorithms | X_400614 | 6 | 200 |
| Data Wrangling | XB_0014 | 6 | 300 |
| Equational Programming | X_401011 | 6 | 300 |
| Information Retrieval | X_400435 | 6 | 300 |
| Principles of Bioinformatics | X_401094 | 6 | 300 |
| Service Science | X_401077 | 6 | 300 |
| Requirements Engineering | XB_0032 | 6 | 300 |
| Educational minor | | | |
| <i>Compulsory courses (OM_EMVERPL)</i> | | | |
| O_EMDID1 | EM Didactiek 1 | 6 | 300 |
| O_EMPRAK1 | EM Praktijk 1 | 6 | 300 |
| O_EMPEERGR | EM Peergroep | 0 | 300 |
| O_EMDID2 | EM Didactiek 2 | 9 | 300 |
| O_EMPRAK2 | EM Praktijk 2 | 9 | 300 |

13. Honours programme

Article 13.1 Faculty Honours components

The components of the Honours programme offered by the faculty are:

| | |
|---|---------------------------------|
| <p>The Faculty component of the Honours Programme at the Department of Computer Science consists of either 12EC or 18 EC that students can earn by taking extra internal courses, and/or conducting a research project. The total volume of any Honours Programme is 30EC, with the interdepartmental part having either 12EC or 18EC, depending on the student's choice for the faculty component.</p> <p>The following options are available for the Faculty component:</p> <ul style="list-style-type: none"> • Option 1: students define and lead a research project that is worth 18 EC; • Option 2: students define and lead a research project that is worth 12 and take the course <i>Caput Elective</i> for 6 EC; • Option 3: students define and lead a research project that is worth 12 EC; • Option 4: students define and lead a research project that is worth 6 EC and take the course <i>Caput Elective</i> for 6 EC; • Option 5: besides <i>Caput Elective</i>, students take, in consultation with the honourscoordinator of the Department of Computer Science, one extra 6EC - course on level 300 which is not in students' regular study programme and which is a meaningful contribution to their honoursprogramme. <p>The educational components of the honoursprogramme offered by the Department of Computer Science are:</p> <ul style="list-style-type: none"> • X_HP003 Honours Research Project 1 (6EC); | <p>Advice OLC; (7.13 a)</p> |
|---|---------------------------------|

| | |
|---|--|
| <ul style="list-style-type: none"> • X_HP007 Honours Research Project 2 (12EC); • X_HP008 Caput Elective (6EC) (Every year the Department of Computer Science offers an extra honours course in period 5, called <i>Caput Elective</i>. Contents reflect timely topics and depend on the availability of staff. Honours students will be informed about this course in January.) | |
|---|--|

14. Binding recommendation on continuation of studies (BSA)

Article 14.1 Binding (negative) recommendation

| | |
|---|---------------------|
| 1. In order to obtain a positive recommendation on continuation of studies, the student must have obtained at least 42 EC by the end of the first year of enrolment. | Advice OLC (7.13 f) |
| 2. Qualitative requirements are not applicable | Advice OLC (7.13 f) |
| 3. Students who receive a binding negative recommendation on continuation of studies cannot enroll for the following Bachelor's programme(s) offered by the Faculty during the subsequent three academic years: x Artificial Intelligence. | Advice OLC (7.13 f) |

15. Evaluation and transitional provisions

Article 15.1 Evaluation of the education

| | |
|--|------------------------|
| 1. The education provided in this programme is evaluated in accordance with the evaluation plan. The faculty evaluation plan offers the framework. | Approval OLC (7.13 a1) |
|--|------------------------|

Article 15.2 Transitional provisions

| | |
|--|---------------------|
| By way of departure from the Teaching and Examination Regulations currently in force, the following transitional provisions apply for students who started the programme under a previous set of Teaching and Examination Regulations: <i>not applicable</i> . | Advice OLC (7.13 a) |
|--|---------------------|

Advice and approval by the Programme Committee B Artificial Intelligence, on 03 June 2019.

Approved by the Faculty Joint Assembly, on 3 September 2019.

Adopted by the board of the Faculty of Science on 30 August 2019.

Appendix I Overview of articles that must be included in the OER

Based on Section 7.13, paragraph 2, of the WHW and other Sections of the Act.

Section B1: Programme specific – general provisions

| 7. General programme information and characteristics | |
|---|------------------------------|
| Article 7.1 Study programme information | 7.13 paragraph 2 sub i, r |
| Article 7.2 Teaching formats used and modes of assessment | 7.13 paragraph 2 sub l, x |
| Article 7.3 Academic student counselling | 7.13 paragraph 2 sub u |
| 8. Further admission requirements | |
| Article 8.1 Additional previous education requirements | 7.25, paragraph 4 |
| Article 8.2 Colloquium doctum (entrance examination) | 7.29, paragraph 2 |
| 9. Interim examinations and results | |
| Article 9.1 Sequence of interim examinations | 7.13 paragraph 2 sub h, s, t |
| Article 9.2 Validity period for results | 7.13 paragraph 2 sub k |

Section B2: Programme specific – content of programme

| 10. Programme objectives, specializations and exit qualifications | |
|--|---------------------------|
| Article 10.1 Programme objective | 7.13 paragraph 2 sub a |
| Article 10.2 Majors (specializations) | 7.13 paragraph 2 sub a |
| Article 10.3 Exit qualifications | 7.13 paragraph 2 sub b, c |
| 11. Curriculum structure | |
| Article 11.1 Academic development | 7.13 paragraph 2 sub a |
| Article 11.2 Major | 7.13 paragraph 2 sub a |
| Article 11.3 Compulsory educational components of the major | 7.13 paragraph 2 sub a |
| Article 11.4 Elective educational components of the major | 7.13 paragraph 2 sub a |
| Article 11.5 Practical exercise | 7.13 paragraph 2 sub d |
| Article 11.6 Participation in practical exercise | 7.13 paragraph 2 sub d |
| 12. Electives | |
| Article 12.1 Elective period | 7.13 paragraph 2 sub a |
| Article 12.2 Minors | 7.13 paragraph 2 sub a |
| 13. Honours programme | |
| Article 13.1 Faculty Honours components | 7.13 paragraph 2 sub a |
| 14. Binding recommendation on continuation of studies (BSA) | |
| Article 14.1 Binding (negative) recommendation | 7.13 paragraph 2 sub f |
| 15. Evaluation and transitional provisions | |
| Article 15.1 Evaluation of the education | 7.13 paragraph 2 sub a1 |
| Article 15.2 Transitional provisions | 7.13 paragraph 2 sub a |

Appendix II Overview of rights to prior consultation (advice) and rights to approve OLC and FGV (Dutch only)

| Onderwerpen Onderwijs – en Examenregeling (OER) 7.13 lid 2 WHW | FGV | | OplC | |
|---|-----|---|------|---|
| | I | A | I | A |
| a. de inhoud van de opleiding en van de daaraan verbonden examens | | | | |
| a1. de wijze waarop het onderwijs in de desbetreffende opleiding wordt geëvalueerd | | | | |
| b. de inhoud van de afstudeerrichtingen binnen een opleiding | | | | |
| c. de kwaliteiten op het gebied van kennis, inzicht en vaardigheden die een student zich bij beëindiging van de opleiding moet hebben verworven | | | | |
| d. waar nodig, de inrichting van praktische oefeningen | | | | |
| e. de studielast van de opleiding en van elk van de daarvan deel uitmakende onderwijsseenheden | | | | |
| f. de nadere regels, bedoeld in de Articleen 7.8b, zesde lid, en 7.9, vijfde lid (BSA) | | | | |
| g. ten aanzien van welke masteropleidingen toepassing is gegeven aan Article 7.4a, achtste lid (verhoogde studielast) | | | | |
| h. het aantal en de volgtijdelijkheid van de tentamens alsmede de momenten waarop deze afgelegd kunnen worden | | | | |
| i. de voltijdse, deeltijdse of duale inrichting van de opleiding | | | | |
| j. waar nodig, de volgorde waarin, de tijdvakken waarbinnen en het aantal malen per studiejaar dat de gelegenheid wordt geboden tot het afleggen van de tentamens en examens | | | | |
| k. waar nodig, de geldigheidsduur van met goed gevolg afgelegde tentamens, behoudens de bevoegdheid van de examencommissie die geldigheidsduur te verlengen | | | | |
| l. of de tentamens mondeling, schriftelijk of op een andere wijze worden afgelegd, behoudens de bevoegdheid van de examencommissie in bijzondere gevallen anders te bepalen | | | | |
| m. de wijze waarop studenten met een handicap of chronische ziekte redelijkerwijs in de gelegenheid worden gesteld de tentamens af te leggen | | | | |
| n. de openbaarheid van mondeling af te nemen tentamens, behoudens de bevoegdheid van de examencommissie in bijzondere gevallen anders te bepalen | | | | |
| o. de termijn waarbinnen de uitslag van een tentamen bekend wordt gemaakt alsmede of en op welke wijze van deze termijn kan worden afgeweken | | | | |
| p. de wijze waarop en de termijn gedurende welke degene die een schriftelijk tentamen heeft afgelegd, inzage verkrijgt in zijn beoordeelde werk | | | | |
| q. de wijze waarop en de termijn gedurende welke kennis genomen kan worden van vragen en opdrachten, gesteld of gegeven in het kader van een schriftelijk afgenomen tentamen en van de normen aan de hand waarvan de beoordeling heeft plaatsgevonden | | | | |
| r. de gronden waarop de examencommissie voor eerder met goed gevolg afgelegde tentamens of examens in het hoger onderwijs, dan wel voor buiten het hoger onderwijs opgedane kennis of vaardigheden, vrijstelling kan verlenen van het afleggen van een of meer tentamens | | | | |
| s. waar nodig, dat het met goed gevolg afgelegd hebben van tentamens voorwaarde is voor de toelating tot het afleggen van andere tentamens | | | | |
| t. waar nodig, de verplichting tot het deelnemen aan praktische oefeningen met het oog op de toelating tot het afleggen van het desbetreffende tentamen, behoudens de bevoegdheid van de examencommissie vrijstelling van die verplichting te verlenen, al dan niet onder oplegging van vervangende eisen | | | | |
| u. de bewaking van studievoortgang en de individuele studiebegeleiding | | | | |
| v. indien van toepassing: de wijze waarop de selectie van studenten voor een speciaal traject binnen een opleiding, bedoeld in Article 7.9b, plaatsvindt (<i>excellentietaject binnen een opleiding</i>) | | | | |
| x. de feitelijke vormgeving van het onderwijs | | | | |
| alle overige onderwerpen die in de OER zijn geregeld maar die niet als zodanig zijn genoemd in art. 7.13 WHW onder a t/m x. | | | | |

De lettering komt overeen met de lettering van Article 7.13 lid 2 WHW

Afkortingen:

FGV: Facultaire Gezamenlijke

Vergadering OplC:

Opleidingscommissie

I: Instemmingsrecht

A: Adviesrecht

Appendix III Ordinances VU Executive Board (CvB) and Binding Bachelor's Guidelines

| Deel B, Article: | Concerns: | CvB ordinance / guideline |
|-------------------------|--|---|
| 11.1.1 | Academische development | Bachelor-richtlijn, revised on 6 June 2017 |
| 11.2 | Major | Bachelor-richtlijn, revised on 6 June 2017 |
| 12.1 | Elective period (first semester, 3rd year) | Bachelor-richtlijn, revised on 6 June 2017 |
| 12.2.1 | Participation in universityminor | CvB ordinance Profileringsruimte 22-11-2010 |

Appendix IV Article 2.1 of the WHW Implementation Decree (1 juni 2018)

(Currently only in Dutch, official translation will follow soon)

1. De persoonlijke omstandigheden bedoeld in de artikelen 7.8b, derde lid, en 7.9, derde lid, van de wet, zijn uitsluitend:
 - a. ziekte van betrokkene,
 - b. lichamelijke, zintuiglijke of andere functiestoornis van betrokkene,
 - c. zwangerschap van betrokkene,
 - d. bijzondere familie-omstandigheden,
 - e. het lidmaatschap, daaronder begrepen het voorzitterschap, van:
bij universiteiten: de universiteitsraad, faculteitsraad, het orgaan dat is ingesteld op grond van de medezeggenschapsregeling, bedoeld in artikel 9.30, derde lid, onderscheidenlijk artikel 9.51, tweede lid, van de wet, het bestuur van een opleiding of de opleidingscommissie, alsmede het lidmaatschap van het bestuur van een stichting die blijkens haar statuten tot doel heeft de exploitatie van voorzieningen, behorende tot de studentenvoorzieningen, dan wel van een daarmee naar het oordeel van het instellingsbestuur gelet op de taak gelijk te stellen orgaan.
 - f. andere in de regelingen, bedoeld in de artikelen 7.8b, zesde lid, en 7.9, vijfde lid, van de wet door het instellingsbestuur aan te geven omstandigheden waarin betrokkene activiteiten ontplooit in het kader van de organisatie en het bestuur van de zaken van de instelling,
 - g. het lidmaatschap van het bestuur van een studentenorganisatie van enige omvang met volledige rechtsbevoegdheid, dan wel van een vergelijkbare organisatie van enige omvang, bij wie de behartiging van het algemeen maatschappelijk belang op de voorgrond staat en die daartoe daadwerkelijk activiteiten ontplooit.
2. Het instellingsbestuur kan voor de toepassing van het eerste lid, onderdeel g, nadere regels vaststellen omtrent het aantal bestuursleden dat ten hoogste per organisatie per studiejaar in aanmerking komt, zomede omtrent welke bestuursfuncties in aanmerking komen.