

Teaching and Examination Regulations (TER)

Faculty of Science

Bachelorprogramme in Business Analytics Academic year: 2019-2020

A: Faculty section

B1: Programme specific section – general provisions

B2: Programme specific section – content of programme

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Section A: Faculty section

1. General provisions

Article 1.1 Applicability of the Regulations

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: Biomedical Sciences Business Analytics Computer Science Information Sciences Artificial Intelligence Mathematics	Advice OLC, approval FGV (9.38 sub b)
2.	These Regulations enter into force with effect from 1 September 2019.	Advice OLC, approval FGV (9.38 sub b)
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.	Advice OLC, approval FGV (9.38 sub b)

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 earlier study followed at and/or outside the Vrije Universiteit Amsterdam study programme(s) (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;

1. 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:

o researching and writing a thesis or dissertation

o carrying out a research assignment

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 (*Student Lifecycle Management*); 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 see under d (double degree programme). A course obtained at the

component 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 (Wet op het Hoger Onderwijs en

Wetenschappelijk Onderzoek);

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

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

1. The programme consists in any case of the following components:	Ordinance CvB,
a. Academic development of at least 24 EC	see appendix 3
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.	
2. In the first year of the programme, the programme will offer at least fourteen contact	Ordinance CvB,
hours a week.	see appendix 3



3.	In the second and third years of the programme, the programme will offer at least twelve	Ordinance CvB,
	contact hours a week.	see appendix 3
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

Article 2.3 Refusal or termination of registration / (iudicium abeundi)

Ex ter stu	rsuant to the provisions of Article 7.42a of the Act, the Faculty Board or the amination Board may, in exceptional circumstances, request the Executive Board to minate or refuse a student's registration on a programme. This may be the case if the dent's conduct or statements demonstrate his or her unsuitability to work in the	WHW
	evant field or discipline, or to take part in the programme's practical training mponent.	
Ex inf iss	a student is suspected of being unsuitable as described in paragraph 1, the amination Board or the Faculty Board will examine the case, and the student will be formed of this immediately. The Examination Board or the Faculty Board will only ue a recommendation after careful consideration of the interests involved and lowing a hearing with the student concerned.	WHW

3. Assessment and Examination

Article 3.1 Signing up for education and interim examinations

programm	lent must sign up to participate in the educational components of the e, the examinations and resits. The procedure for signing up is described in an ne Student Charter.	Ordinance CvB, see appendix 3
2. Signing up	o may only take place in the designated periods.	Ordinance CvB, see appendix 3
study. Thi	t fails both the exam and the resit, the student must repeat the entire unit of s rule does not apply to practical exercises and programmes that make use of t marks that retain their validity. For further regulations, see Section B of the e 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

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

1.	An oral assessment is public unless the Examinations Board on request determines	Advice OLC;
	otherwise.	approval FGV
	other wise.	(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

1. The examiner determines the result of a written interim examination as soon as	Ordinance CvB,
possible, but at the latest within fifteen working days. Notwithstanding the provisions	see appendix 3
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.	
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).	
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.	
2. a. The examiner determines the result (i.e. mark) of an oral examination as soon as	Advice OLC;
possible, though within one working day, after the examination has finished and	approval FGV (7.13 o)
informs the student accordingly. The third clause of the first paragraph applies.	(7.15 0)
b. The examiner will determine the result of the partial examination at least five working	
days prior to the next (partial) examination opportunity.	
3. In the case of alternative forms of oral or written examinations, the Examinations Board	Advice OLC;
determines in advance how and by what deadline the student will be informed of the	approval FGV
results.	(7.13 o)
4 A student can submit a request for reassessment to the examiner. A request for	Advice OLC;
reassessment does not affect the time period for lodging an appeal.	approval FGV
	(9.38 sub b)
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).	
6. Paragraph 1 shall apply mutatis mutandis to the premaster student, with the exception of	
provisions under a) and b).	
	

Article 3.5 Examination opportunities

1.	a. Per academic year, two opportunities to take examinations per educational component will be offered.b. The options for retaking practical components, work placements and theses are detailed in the relevant work placement manual, teaching regulations or graduation regulations.	Ordinance CvB, see appendix
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.	Ordinance CvB, see appendix
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.	Advice OLC; approval FGV (7.13 j)
4.	The Examination Board may allow a student an extra opportunity to sit an examination if that student: a) is lacking only those credits to qualify for his or her degree; b) has failed the examination during all the previously offered attempts, unless participation in an examination was not possible for compelling reasons. 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.	Ordinance CvB, see appendix
5.	This article shall apply mutatis mutandis to the premaster student.	

Article 3.6 Marks

1.	Marks are given on a scale from 1 to 10 with no more than one decimal point.	Ordinance CvB,
	•	see appendix 3
2.	The final marks are given in whole or half points.	Ordinance CvB,



Ordinance CvB, 3. Final marks between 5 and 6 will be rounded off to whole marks: up to 5.5 rounded down; see appendix 3 from 5.5 rounded up. To pass a course, a 6 or higher is required. 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: Grade From Up to 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 4,25 3,75 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 8,5 8,75 8,75 9,25 9,0 9,25 9,75 9,5 9,75 10,0 10 Ordinance CvB, The Examination Board can allow using symbols rather than numbers, such as: pass, fail, see appendix 3 (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).

Article 3.7 Exemption

1.	At the written request of the student, the Examination Board may exempt the student	Advice OLC;
	from taking one or more examination components, if the student:	approval FGV (7.13 r)
	a) has passed a course component of a university or higher professional education	(7.13 f)
	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.	
2.	A maximum of 60 EC of the curriculum can be accumulated through granted	Advice OLC;
	exemptions for the one three-year bachelor programme. The substituting courses	approval FGV
	(educational components) are not included.	(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
1		(9.38 sub b)

Article 3.8 Validity period for results

1. The validity period of interim examinations passed and exemption from interim examinations is unlimited, unless otherwise specified in Section B.

This article shall apply mutatis mutandis to the premaster student.

Legal provision



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

1. For at least twenty working days after the announcement of the results of a written into examination, the student can, on request, inspect his/her assessed work, the questions assignments set in it, as well as the standards applied for marking.	and approval FGV (7.13 p en q)
The place and time referred to in the previous clause will be announced at the time of interim examination on VUnet or Canvas.	tne
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 f 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 individual post-examination discussion to the relevant examiner. The discussion shall place at a time and location to be determined by the examiner.	1 ECV
4. This article shall apply mutatis mutandis to the premaster student.	

Article 3.10 Fraud and plagiarism

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	Ordinance CvB
submitting a text, the student implicitly consents to the text being saved in the database	
of the detection programme concerned.	

4. Honours programme

Article 4.1 Honours programme

1.	Vrije Universiteit Amsterdam offers an honoursprogramme for students who meet the	Ordinance CvB,
	admission requirements. As to participate in the Honours programme, the student can	see appendix 3
	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.	
2.	The honoursprogramme comprises 30 EC, a minimum of 12 EC of which consist of	Ordinance CvB,
	faculty honourscomponents and a minimum of another 12 EC consist of interfaculty	see appendix 3
	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.	
3.	For admission to the honoursprogramme, the student must have secured all credits from	Ordinance CvB,
	the first year and have been awarded a weighted average mark of at least a 7.5.	see appendix 3
4.	A student who has met the requirements of the regular Bachelor's programme within the	Ordinance CvB,
	nominal duration of study, who has achieved an average weighted mark of at least 7.5 for	see appendix 3
	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.	
5.	In order to prevent significant unfairness, the Examination Board may deviate from the	(See art. 6.1.)
	provisions of paragraphs 3 and 4.	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

1.	The faculty board is responsible for the correct registration of the students' study results.	Advice OLC;
	After the assessment of an educational component has been registered, every student has	approval FGV (7.13 u)
	the right to inspect the result for that component and also has a list of the results achieved	(7.13 u)
	at his/her disposal in VUnet.	
2.	Enrolled students are eligible for academic student counselling. Academic student	Advice OLC;
	counselling is provided by	approval FGV
a. T	he Student General Counselling Service	(7.13 u)
b. S	tudent psychologists	
c. Fa	aculty academic advisors	
3.	This article shall apply mutatis mutandis to the premaster students.	

Article 5.2 Advice regarding continuation of studies

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)

1.	The recommendation issued at the end of the academic year will contain a binding	Ordinance CvB,
	rejection if the student has not achieved the standard required for positive	see appendix 3
	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.	
2.	As soon as possible after the last resits of the second semester of the first year, a student	Ordinance CvB,
	who has not met the standard will be informed that the faculty board intends to issue him	see appendix 3
	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.	
3.	Along with the information referred to in the previous paragraph, the student will also be	Ordinance CvB,
	informed of the possibility of being heard by the BSA committee and of how he or she can	see appendix 3
	apply for such a hearing.	
4.	As soon as possible (no more than 10 working days) after the hearing and on the advice of	Ordinance CvB,
	the BSA committee, the faculty board will determine which students will be issued with a	see appendix 3
	negative binding recommendation on continuation of studies.	



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

Article 5.4 Personal circumstances

1.	The faculty board will not include a rejection in the binding recommendation on the	Advice OLC
	continuation of studies in the case of personal circumstances, as a result of which the	(7.13 f)
	student concerned cannot have been reasonably expected to have met the BSA standard.	
2.	If a circumstance, as described in Section 2.1 of the Implementation Regulation of the	Advice OLC (7.13 f)
	Higher Education and Research Act, should occur, the student must notify the academic	(7.131)
	adviser office as soon as possible, providing details of:	
	a) the period in which the circumstance occurs or occurred;	
	b) a description of the circumstance and its seriousness;	
	c) 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.	
3.	If required, the academic advisor may advise the BSA Committee on the extent to which	Advice OLC
	personal circumstances have influenced the student's study progress.	(7.13 f)

Article 5.5 Adaptations for students with a disability

	-	
1.	A student with a disability can, at the moment of submission to VUnet, 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 advice 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	



provision concerning the fulfilment of the exit qualifications for the study programme	
mentioned in par. 1.	

6. Hardship clause

Article 6.1 Hardship clause

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

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

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

1.	The programme Business Analytics CROHO number 56856 is offered on a full-time and part-time basis.	Advise OLC; approval FGV (7.13 i)
2.	The language of instruction is English.	Advise OLC; approval FGV (9.38 sub b)

Article 7.1a. Deviant size of educational component

By way of derogation from art. 2.1 par. 3, the units listed below have deviant size of 3 EC: - X_400621: Sets and Combinatorics;	Approval OLC (art. 7.13
 X_400316: Project Business Analytics 1; X_400572: Project Business Analytics 2; 	lid 2, under e), approval CvB
- X_400578: Risk Management;	
- X_400652: History of Science; - X_400433: Philosophy.	

Article 7.2 Teaching formats used and modes of assessment

	i tioi	7.2 Teaching formats used and modes of assessment	
	1.	The programme uses the teaching formats as specified in the study guide.	Advise OLC;
			approval FGV
			(7.13 x)
ĺ	2.	The modes of assessment used per educational component are specified in the study guide.	Advise OLC;
			approval FGV
			(7.13 l)

8. Further admission requirements

Article 8.1 Additional previous education requirements

II tici	2 8.1 Additional previous education requirements	
1.	Students who do not meet the previous education requirements 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 one or more of the following exams: <i>Not applicable</i> .	Exception in WHW: advice OLC
2.	Applicants with a diploma from a country other than the Netherlands will meet the profile requirements as stated under paragraph 1 if the level of mathematics and the topics covered are comparable to Mathematics B as taught in Dutch pre-university secondary school programmes. The Examination Board will assess whether these conditions have been met. The topics covered are specified in <u>Appendix V</u> .	
3.	Students who do not meet the previous education requirements but have successfully completed the first year of a higher professional education programme 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 examination board will assess whether these conditions have been met.	Advise OLC; approval FGV (9.38 sub b)

Article 8.2 Colloquium doctum (entrance examination)

1.	Persons aged 21 years and older who do not meet the requirements for previous education	Advise OLC;
	can submit a request to the Executive Board to take an entrance examination (colloquium	approval FGV
	doctum), as stipulated in Section 7.29 of the WHW. The entrance examination concerns	(9.38 sub b)
	the following subjects at final pre-university examination level:	
	a) Mathematics B equivalent to final examination university entry level (VWO), and;	
	b) A command of English equivalent to pre-university final-exam level (VWO).	



2. 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.

Advise OLC; approval FGV (9.38 sub b)

9. Interim examinations and results

Article 9.1 Sequence of interim examinations

1. Students may participate in interim examinations [or practical exercises] of the educational components below only if they have passed the interim examination or examinations for the educational components mentioned hereinafter:

Advise OLC; approval FGV (7.13 h, 7.13 s/t)

- All third-year students of Business Analytics are required to take the Study and Career course in period 4. Students can only receive credits for completing the course Bachelor Project: Business Case if they have passed the Study and Career course.
- Students may only start with their Bachelor Project: Business Case if they meet the following conditions at the start of the course: (a) they have earned at least 120 of the full 180 credits, (b) they have passed the course Statistical Data Analysis (X_401029), (c) they have passed the course Project Big Data (X_400645).

Article 9.2 Validity period for results

II ticic	title 9.2 Validity period for results			
1.	As laid down in article 3.8.	Advise OLC;		
		approval FGV		
		(7.13 k)		
2.	A student may request the Examination Board to extend the validity of an exam. If the	Legal provision		
	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.			
3.	In situations where a limited period of validity applies, the period of validity of	Legal provision		
	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.			

Article 9.3 Exemptions

Not ap	licable	Advice OLC,
1		approval FGV
		(art. 7.13 lid 2
		onder j art.
		9.38 sub b)

Article 9.4 Degree

Students who have successfully completed the final examination and met all other requirements	Legal
stipulated in the WHW will be given the degree of Bachelor of Science (BSc). The degree	provision,
awarded is stated on the diploma.	WHW



Section B2: Programme specific – content of programme

10. Programme objectives, specializations and exit qualifications

Article 10.1 Programme objective

The objective of the programme is for students to acquire sufficient basic theoretical and practical	Advise OLC;
knowledge and skills in the field of Business Analytics and any related science disciplines to enable	(7.13 a)
them to go on to pursue a Master's in Business Analytics or a related science discipline, or to enter	
the labor market. The programme also aims to impress upon the student the importance of the	
discipline in a broader scientific, philosophical and societal context.	

Article 10.2 Majors (specializations)

The programme has no specializations.	Advise OLC;
	(7.13 a)
	` '

Article 10.3 Exit qualifications

Upon completing the Bachelor's programme in Business Analytics, the student is expected	Approval
 to have a thorough theoretical and practical knowledge of the broad field of mathematics and 	OLC (7.13 c)
computer science as applied in commercial and industrial processes;	
to have experience in the application of basic principles from the fields of mathematics and	
computer science, also in a multidisciplinary business context;	
to have some experience in modelling business processes using methods from the fields of	
mathematics and computer science;	
to be knowledgeable about the principles of business economics;	
to have gained experience working on a business problem in a multidisciplinary team;	
• to have become familiar with basic research skills in that team; to have been positively assessed with regard to those skills;	
to be able to report orally and in writing on his own project or a joint project, both to professionals and to a wider audience;	
• to have knowledge of and experience with a selection of mathematical software packages that are commonly used in business and industry;	
to be aware of the role of mathematics, computer science and business	
economics/econometrics in other sciences and in society;	
to be aware of the potential for further study and employment following completion of the	
Bachelor's programme.	

Article 10.4 Language test

1. At the start of the first year of study every student must complete a diagnostic language te	
(AB_ELT) in the language of instruction of his or her programme.	(7.13 a)
2. Any student who does not achieve a pass in the language test must take the 'Refresher	Approval
Course' organized by the Language Desk (Taalloket).	OLC (7.13 c)



11. Curriculum structure

Article 11.1 Academic development

1.	Academic development is part of the study programme. This includes:	Ordinance
	(1) Academic skills/critical reasoning;	CvB, see appendix 3
	(2) Methods & techniques;	аррения 3
	(3) Philosophical training.	
2.	Academic development is covered in the following compulsory courses:	Advise OLC;
	(1) X_400619: Introduction to Business Analytics;	(7.13 a)
	(2) X_400635: Calculus 1;	
	(3) X_400004: Statistics;	
	(4) X_400634: Introduction to Programming (Java);	
	(5) X_400652: History of Science;	
	(6) X_400433: Philosophy.	

Article 11.2 Major

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	Ordinance
	advanced (300) level.	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.

Year 1				
Name of educational component	course code	nr of EC	level	Advise OLC;
Accounting	E_IBA1_ACC	6	100	(7.13 a)
Calculus 1	X_400635	6	100	
Calculus 2	X_400636	6	100	
English Language Test	AB_ELT	0	100	
Introduction to Business Analytics	X_400619	6	100	
Introduction to Programming (Java)	X_400634	6	100	
Linear Algebra	X_400042	6	100	
Operations Research	X_400618	6	100	
Probability Theory	X_400622	6	200	
Project Business Analytics 1	X_400316	3	100	
Project Business Analytics 2	X_400572	3	100	
Risk Management	X_400578	3	100	
Sets and Combinatorics	X_400621	3	100	

Year 2				
Name of educational component	course code	nr of EC	level	Advise OLC;
Advanced Programming	X_400561	6	200	(7.13 a)
Business Intelligence and Analytics	E_IBK3_BIA	6	300	
Business Simulation	X_401006	6	200	
Databases	X_401008	6	200	
Dynamics and Computation	X_400647	6	200	
Finance	E_IBA2_FIN	6	200	
Project Big Data	X_400645	6	300	
Statistical Data Analysis	X_401029	6	300	
Statistics	X_400004	6	200	



Stochastic Modeling	X_400646	6	200	
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Year 3				
Name of educational component	course code	nr of EC	level	Advise OLC;
Bachelor Project: Business Case	XB_41000	12	300	(7.13 a)
Combinatorial Optimization	X_401067	6	300	
History of Science	X_400652	3	200	
Machine Learning	X_400154	6	300	
Philosophy	X_400433	3	200	

Article 11.4 Elective educational components of the major_

Not applicable

Article 11.5 Practical exercise_

Not applicable

Article 11.6 Participation in practical exercises and tutorials

Not applicable

12. Electives

Article 12.1 Elective period

	· · · · · · · · · · · · · · · · · · ·	
1.	The first semester of the third year of the curriculum comprises elective educational	Ordinance CvB,
	components.	see appendix 3
2.	For this elective period, the student can take:	Ordinance CvB,
	a) a minor (a coherent package of related educational components);	see appendix 3
	b) individual choice of at least five educational components at the faculty or	
	elsewhere, of which at least two (12 EC) must be at level 300, and maximum 1	
	course (6 EC) at level 100;	
	c) an educational component of the university abroad. In addition, one educational	
	component of the master programme (6 EC) at level 400 or higher can be included	
	in the package. The approval of the examination board is required. The educational	
	component concerned, cannot be included in the master educational programme.	
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'	Ordinance CvB,
	without prior consent from the examination board. The 'University minors' are listed on	see appendix 3
	the VU website.	
2.	The student can take one of the following minors without prior consent from the	Advise OLC;
	Examination Board:	(7.13a)
	a) the minor Business Analytics and Data Science;	
	b) the Educational Minor Mathematics;	
	c) a VU minor, also known as University Minor.	



13. Honours programme

Article 13.1 Faculty honours components

The components of the honours programme offered by the bachelorprogramme Business Analytics (30 EC) are:

Departmental courses, including Econometrics and Operations Research, 12-18 EC:				
Name of educational component	course code	nr of EC	level	Advise OLC;
Complex Analysis	X_400386	6	300	(7.13 a)
Computer Networks	X_400487	6	100	
Discrete Mathematics	XB_0008	6	100]
Honours Project Business Analytics (*)	X_417011	6	300	
Intelligent Systems	X_401086	6	200	
Introduction to Mathematical Modeling	XB_0006	3	100]
Knowledge and Data	X_400083	6	300	
Mathematical Analysis	XB_0009	6	100]
Mathematical Economics I	E_EOR2_ME1	6	200]
Mathematical Modeling of Dynamical Systems	XB_0007	6	100	
(*) Compulsory course				

14. Binding recommendation on continuation of studies (BSA)

Article 14.1 Binding (negative) recommendation

Ī	1.	In order to obtain a positive recommendation on continuation of studies, the student must	Advise OLC
		have obtained at least 42 EC by the end of the first year of enrolment.	(7.13 f)
	2.	Students who receive a binding negative recommendation on continuation of studies	Advise OLC
		cannot enroll for the following bachelor's programme(s) offered by the faculty during the	(7.13 f)
		subsequent three academic years: Business Analytics.	

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 (attached)	Approval OLC
	evaluation plan. The faculty evaluation plan offers the framework.	(7.13 a)

Article 15.2 Transitional provisions

By way of departure fr	om the Teaching and Examination Regulations currently in force, the	Advise OLC
following transitional 1	provisions apply for students who started the programme under a previous	(7.13 a)
set of Teaching and Ex	amination Regulations: Not applicable.	

Advice and approval by the Programme Committee of Business Analytics, on 3 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

Gotton 2211 G.			
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 \boldsymbol{FGV}

(Dutch only)

Onderwerpen Onderwijs - en Examenregeling (OER) 7.13 lid 2 WHW		FGV		OplC	
		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					
onderwijseenheden					
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				L	
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			-	Н	
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				Н	
gelegenheid worden gesteld de tentamens af te leggen					
n. de openbaarheid van mondeling af te nemen tentamens, behoudens de bevoegdheid van	_			т	
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			_	H	
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				P	
v. indien van toepassing: de wijze waarop de seiectie van studenten voor een speciaal traject binnen een opleiding, bedoeld in Article 7.9b, plaatsvindt <i>(excellentietraject <u>binnen</u></i>		1			
een opleiding)					
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.



Appendix V Prior education requirements

Additional prior education requirements for students with a foreign diploma.

A student will meet the prior education requirements if his/her diploma includes mathematics at a level commensurate with Mathematics B as taught in Dutch pre-university programmes (VWO), including at least 7 of the following 10 topics:

- a. Equations and inequalities
- b. Functions and graphs
- c. The derivative function
- d. Exponents and logarithms
- e. Trigonometric functions
- f. Differential calculus
- g. Exponential and logarithmic functions
- h. Integral calculus
- i. Trigonometry
- j. Derivative and second derivative

The topics listed above are specified in greater detail below.

- a. Equations and inequalities
 - Quadratic Equations
 - x Higher order equations
 - x Equations with roots and fractions
 - Systems of equations
- b. Functions and graphs
 - x Linear functions
 - X Quadratic functions
 - x Change graphs (translations and multiplications)
 - x Root functions
 - x Fractional functions
- c. The derivative function
 - Increment graphs
 - x The differential quotient
 - x Tangents and rates of change
 - x Limit and derivative
 - Applications of the derivative (rate)
- d. Exponents and logarithms
 - x The standard function
 - x Exponential growth
 - x Logarithms
 - Applications of logarithms
- e. Trigonometric functions
 - X Unit circle and radial
 - x Trigonometric equations
 - x Sinusoidal transformations
 - x Plotting sinusoids
- f. Differential calculus
 - The derivative of fractional functions (product rule and quotient rule)
 - The derivative of power functions
 - x The chain rule
 - x Tangents and apexes
 - x Apexes and intersections
- g. Exponential and logarithmic functions
 - x Logarithmic and exponential equations



- Graphs of exponential and logarithmic functions
- x Base e
- x The natural logarithm
- h. Integral calculus
 - x Riemann sums and integrals
 - Surfaces and volumes (in revolutions around the Xaxis)
 - x Reduced functions
 - Applications of integrals
- i. Trigonometry
 - x Trigonometric formulas
 - x Differentials of trigonometric functions
 - x Reducing trigonometric functions
- j. Derivative and second derivative
 - The second derivative
 - Applications of the second derivative
 - x Tangents in graphs
 - x Tangentials and perpendicular intersections

An exemption from the required similarity in topics covered as provided here may be granted if the level of mathematics is demonstrably higher than Mathematics B at a Dutch pre-university school (VWO).

