GUIDELINES FOR ROBUST AND ACADEMICALLY FEASIBLE EDUCATION

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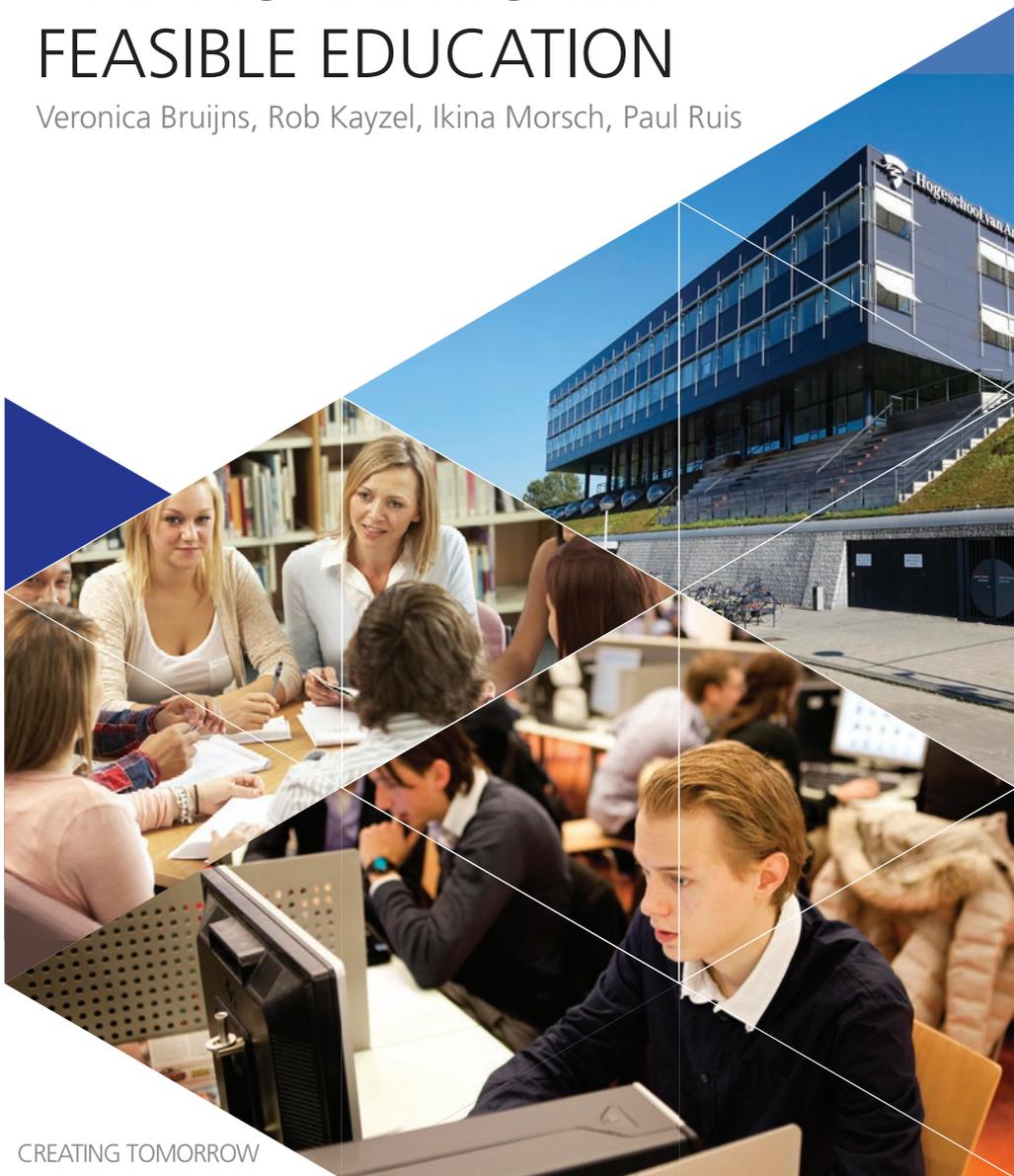
CREATING TOMORROW

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FOREWORD

There are many good things to say about the education at AUAS. However, we have not yet managed to optimally position as many students as possible and ensure they complete their studies within the nominal time period. The academic success rates have not yet reached our target levels. Student satisfaction is also too low with regard to a number of crucial aspects.

Research shows that a number of basic principles are key to achieving robust and academically feasible education. They have a positive effect on the quality of the education, the students' satisfaction with the education and the academic success rate. This is unanimously shown by the report by Wijnen et al., the ICLON model and other similar studies. Within the 'Smart' programme, a project team set to work on a number of design criteria for robust and academically feasible education. The team gathered experiences and insights within AUAS and combined them with findings obtained from research. The product of this work was a set of design criteria. By applying these criteria to our education, we expect to be able to increase our students' satisfaction and academic results.

Some of these principles have already been fully adopted across AUAS, while other aspects have been formulated into policy but not yet fully and consistently implemented. These policy agreements serve as the basis in these guidelines, and a number of references to them are made. The added value of these guidelines is that they display the cohesion between the various units.

A vital factor to robust and academically feasible education is practicability from the perspective of teaching logistics. Campus creation only intensifies the need for coordination. Consequently, in addition to being educationally substantiated, the design criteria are also tested with regard to logistical consequences. In this way, they also contribute to smart educational organisation.

The way in which Amsterdam University of Applied Sciences implements these design criteria is recorded in the 'Strategy for the implementation of design criteria for robust and academically feasible education' memorandum, adopted by the Executive Board on 10 December 2014. The memorandum's basic principle is that within six years (the accreditation cycle), every AUAS programme should offer robust and academically feasible education in accordance with the design criteria in these guidelines. The deans and programme managers are responsible for implementation. Monitoring and evaluation will take place within the regular policy cycle.

'Robust and academically feasible education' is intended for teams of lecturers as well as support staff, who bear collective responsibility for the design and structure of education. These guidelines provide us with a cohesive set of design criteria for the education provided at AUAS.

Huib de Jong
Rector of AUAS
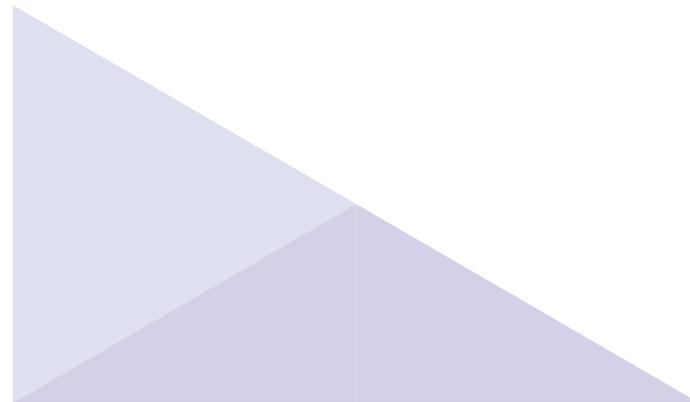
1. INTRODUCTION

These guidelines for robust and academically feasible education describe a set of design criteria for the development, organisation and provision of education. The criteria relate to:
1. curriculum and assessment
2. timetables
3. teaching
4. information provision
5. programme teams and support staff.

The universal principle for the design criteria is graduation within the nominal study period. This means that at AUAS, we assume that every student is capable of achieving their first-year diploma in one year and their Bachelor's degree within four years provided they comply with admission requirements, spend sufficient time on their studies every week and give their best effort. The key question is this: how can we challenge our students to do this and how can we organise this as smartly as possible? Achieving this will require a contribution from both students and staff, not just individually, but also – and especially – as a team.

The design criteria are proven and workable principles derived from the research literature and experience gained within AUAS and other higher professional education institutions. They constitute a cohesive package in which the content and organisation of education are viewed as an integral whole. It is essential that the criteria are applied cohesively and a collective approach is adopted with regard to content and organisation. The design criteria are formulated at the conceptual level. This means that they are useful indicators, but do not serve as blueprints for the definitive design (see Chapter 2 for a detailed description of the criteria). Programme teams can then further concretise the design criteria in a way that is compatible with the programme-specific situation. These guidelines provide the information required to do this. In this way, we accommodate the different points of departure of each programme. The examples included offer ideas about how to interpret more abstractly formulated terms such as 'large', 'small', 'more' or 'less'.
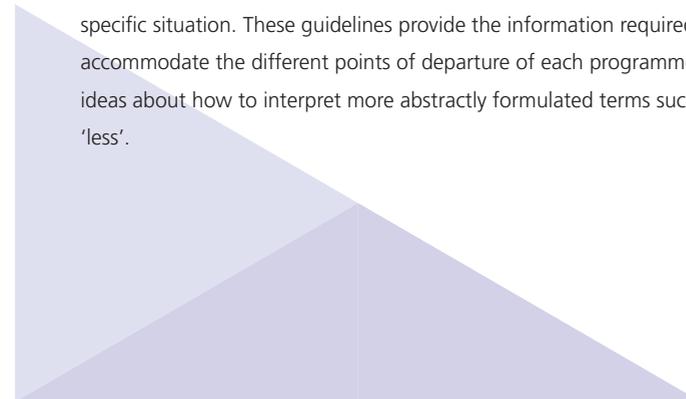
The objectives of integrally implementing the design criteria are as follows:

1. To realise study programmes that are more academically feasible and contribute to increasing the academic success rate.
2. To boost student satisfaction with the organisation and structure1 of education, assessment and counselling.
3. To encourage members of programme teams to work with each other and with support staff. They all take collective responsibility for realising a robust and academically feasible programme. This is expected to contribute to smarter educational organisation.
4. To boost employee satisfaction by creating a more transparent, predictable and durable working environment.

Before addressing the background motivation for formulating the criteria, we will give a definition of 'robust' and 'academically feasible education'.

Definitions

Academically feasible education is education that enables students to complete their studies within the established period: as a rule, interim examinations[2] should be passed at the first attempt, the first-year diploma should be achieved in one year and the Bachelor's degree in four years. Both the educational material and the lecturers who convey it should motivate, inspire and support the students and set clear requirements. We want students to get the very best out of themselves. For this reason, the curriculum is designed to encourage them to spend all of the designated hours on their studies. The structure of the curriculum helps them to do this by offering clearly defined focus periods, regular deadlines and feedback on their progress, study skills and results. There will be no weeks with peak loads, nor weeks without any educational or assessment activities. Students are informed of what is expected of them in a clear and timely manner. The study programme will devote personal attention to every student. The education is compatible with the students' various ability levels and learning styles.

Robust education is education that is organised transparently and predictably. During the academic year, few changes will be made to the curriculum (if any). The schedule of different teaching methods (Q&A sessions, seminars, practical sessions etc.) is fixed for every week and

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1   The term 'structure' refers to the scheduling into study periods or semesters, manifest in timetables specifying contact hours and assessments.
2   In these guidelines, the term 'interim examination' also refers to partial interim examinations, unless partial interim examinations are specifically and separately mentioned.
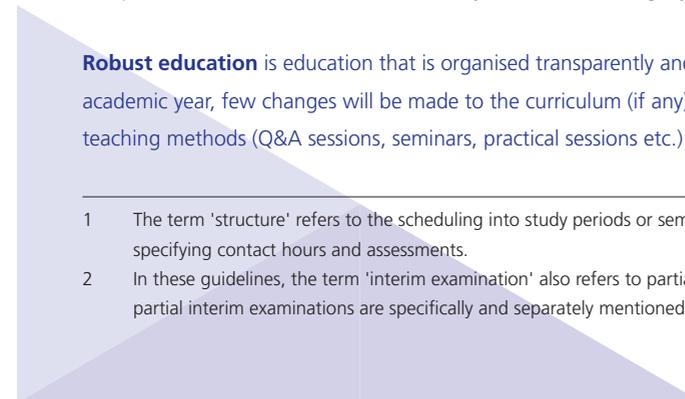
study period in the academic year. No contact hours with students will be cancelled. In the event of absence or illness, lecturers fill in for each other. Robust education means a durable curriculum structure that remains the same for many years. The education programme is updated through the content of the course modules.

Background
The reasons for formulating criteria for robust and academically feasible education are twofold:
1. Student satisfaction within AUAS is too low.
2. Academic success rates within AUAS programmes are not meeting performance targets.

Student satisfaction
We gauge student satisfaction from two sources: the annual national student survey (NSE) and the Options Guide for Higher Education (Keuzegids Hoger Onderwijs). AUAS failed to achieve its target values in the NSE. The percentage of students who report being satisfied or very satisfied has dropped from 67.6% in 2012 to 64.9% in 2014. We therefore failed to achieve the agreed performance target of 65%. We received particularly low scores for the aspects of study timetables (2.85), provision of information (2.96) and quality control (2,97). A number of aspects display a negative trend, with scores lower than in previous years[3]. The scores show that a large number of programmes are failing to set robust and academically feasible timetables and that many timetable adjustments are announced too late. This information is often late, inconsistent, and scattered across various media such as the digital learning and working environment (DLWO), the student information system (SIS) and the programme syllabi. This is inconvenient and annoying to students and lecturers alike.

In the 2014 Options Guide for Higher Education (Keuzegids Hoger Onderwijs), 19 AUAS programmes are amongst the bottom three in the national league tables for comparable courses. Only three AUAS programmes were amongst the top three (not including programmes with three or fewer partner programmes in the country). We are performing worse than other universities of applied sciences, including in the G5 region[4]. Overall, AUAS is second to last in the table. Amongst the G5 institutions, AUAS is in second-last place for nearly all aspects of the NSE. This testifies to a decline in quality that is damaging the reputation of AUAS.

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3   State of affairs in education at AUAS, June 2014.
4   The institutions in the Randstad (G5) region are: InHolland University of Applied Sciences, Rotterdam
     University of Applied Sciences, The Hague University of Applied Sciences, University of Applied Sciences
     Leiden and Amsterdam University of Applied Sciences.

Based on the above, we can conclude that despite all of our efforts, we have failed to achieve the targets we set for ourselves[5]. We have not managed to turn the tide of student dissatisfaction into a positive trend.

Academic success
The percentage of students achieving their first-year diploma in one year is decreasing. This means that many students are starting their second year with a study delay. When structuring the second academic year, the programme teams must take into account the fact that a large number of students still need to complete first-year course units. At 54%, the percentage of students that complete their study programme in four years is also falling [6] across AUAS.

Academic success rates and dropout rates at AUAS. Source: State of affairs in education at AUAS (June 2014).

Four schools have a first-year dropout rate of over 45%.
In three schools, less than 50% of students achieve their first-year diploma within two years.
In two schools, less than 50% of students complete the main phase of their programme within four years.
In two schools, around 30% of students enrolled graduate within five years.

Across AUAS, 32% of students drop out during the first year and the dropout and transfer rate in the main phase is 45%[7]. Dropping out and unnecessary transfers reflect disappointment among students and result in prolonged study periods. This means they accrue greater student debt and enter the job market later. The programme teams have to invest a great deal of extra time in guidance and advice. Also, when students drop out during the main phase or exceed the nominal study duration, AUAS misses out on funding.

Conclusion: we have not yet managed to optimally position as many students as possible and ensure they complete their studies within the nominal time period. The academic success rates are lower than the performance targets agreed between AUAS and the Ministry of Education, Culture and Science.

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5   AUAS Profile and Performance Agreements, May 2012.
6   State of affairs in education at AUAS, June 2014.
7   In accordance with the definitions of the performance agreements dated April 2014.

The role of design criteria in academic success

Academic success depends on multiple factors: the students themselves, the lecturer teams and the design of the curriculum. The students' backgrounds and attributes also play a crucial role, such as prior knowledge, intelligence, skills, motivation and persistence, as well as the job and education levels of their parents. It is important that the lecturer team pays attention to each individual student, provides a secure learning environment and sets high expectations for them. The lecturers support the learning process, providing inspiration and motivation and setting requirements. They are experts in both content and teaching methods, they set an example for their profession and they work well as a team.

The way the curriculum is designed is another important factor in the likelihood of academic success. Designing and adjusting curricula is mainly a long-term and organic process to which all lecturers devote their best efforts. However, a solid end result requires more than this. Other factors are also required, such as cohesion between the various units at the programme level. Numerous studies have shown that the structure of education and assessment can increase the likelihood of academic success and student satisfaction. In itself, this does not tell us anything we did not already know. However, AUAS now possesses these guidelines, giving us a cohesive set of design criteria that we can use to adopt an integral approach to both educational and logistic principles. When the programme teams structurally implement these design criteria, the educational and logistic principles help to bind the curriculum.

Organisation of this document

In these guidelines, we will extensively address how the design criteria influence academic success. Chapter 2 explains the design criteria and how they relate to existing AUAS policy and accreditation frameworks. Chapters 3-7 address the individual criteria, providing:
1. explanation of the criterion in question
2. evidence from research
3. substantiation.

Every chapter concludes with logistic recommendations and – if applicable – an example implementation.

To ensure everyone is speaking the same language, we define exactly what we mean by each separate criterion. However, when applying them to educational practice, it is extremely important that all criteria are viewed together as a cohesive set, as the most significant impact on the

robustness and academic feasibility of education is expected when all design criteria are applied in **connection** with each other. How the set of criteria will be applied in practice depends on the specific nature of the programme and its student population.

In Chapter 8, we describe how we will monitor and investigate the application of the design criteria. Chapter 9 includes four examples of concrete implementations.

2. OVERVIEW OF DESIGN CRITERIA FOR ROBUST AND ACADEMICALLY FEASIBLE EDUCATION

2.1 THE DESIGN CRITERIA

The table below displays an overview of the design criteria organised into categories. In the following chapters, each criterion is explained and substantiated.

ACADEMIC PROGRAMME AND DESIGN OF EDUCATIONAL STRUCTURE	RELATIONSHIP BETWEEN EXISTING AUAS POLICY/AGREEMENTS[8]
Structure of the curriculum and assessment Programme teams: - set out a small number of course units per study period and schedule them preferably in series rather than in parallel; - offer interim examinations at various points throughout the study period and observe a maximum number of summative interim examinations per study period; - make resits unattractive to students and favour integrated resits; - enable compensation within course units; - use a variety of assessment formats; - provide regular feedback to students; - further investigate a certain percentage of failing grades; - can, under certain circumstances, issue a binding study advice of 60 ECTS.	- **AUAS Assessment Policy** - **Teaching and Examination Regulations** - **Guideline for contact hours**

8   See https://beleid.mijnhva.nl/nl/Paginas/default.aspx for the established policy documents and agreements.

Structure of timetable	- Quality standards for timetabling
Programme teams:	- AUAS annual timetable
- use all 40 weeks for education and assessment;	- Guideline for contact hours
- operate a weekly timetable that will remain the same for at least one study period;	
- operate an annual interim-examination timetable set at the beginning of the academic year.	
Educational structure	- AUAS vision of learning and education
Programme teams:	- Attendance guideline
- provide small-scale teaching and give their all to encourage students to actively participate;	
- make optimal use of blended learning;	
- integrate student counselling into the curriculum.	

PRECONDITIONS	RELATED AREAS OF EXISTING AUAS POLICY/AGREEMENT
Information-provision structure	- Teaching and Examination Regulations
Operational management offices and programme teams:	
- provide consistent information from a single source via the Teaching and Examination Regulations (OER), the Digital Working and Learning Environment (DWLO), the Student Information System (SIS), the course catalogue and the programme syllabi, and ensure timely compliance with fixed dates for information provision;	
- record interim examination results in SIS.	

Structure of programme team/support staff	- Quality standards for timetabling
- Programme teams and operational management offices:	
- bear joint responsibility for the design and structure of the education and chain planning;	
- coordinate the organisation of educational and	
- assessment programmes;	
- take durable programme structure as their point of departure when making adjustments to the education;	
- connect educational and organisational expertise directly to the programme team.	

See Appendix 1 for explanation of the following terms: educational structure, course unit, programme team, interim examination, annual interim-examination timetable, summative assessment, formative assessment, academic success rate.

2.2 ALIGNMENT WITH EXISTING AUAS POLICY AND ACCREDITATION FRAMEWORKS

Agreements regarding various design criteria have already been made within AUAS and established in policy documents. Which policy documents or agreements[9] are already in force is displayed in the right-hand column of the table in Section 2.1. The design criteria build further upon existing policy and agreements. The added value of the design criteria is that they display the cohesion between the various units.

9   See https://beleid.mijnhva.nl/nl/Paginas/default.aspx for the established policy documents and agreements.

During NVAO accreditations, robust and academically feasible education is predominantly tested according to standard 2 – the educational learning environment[10]:

> *'The curriculum, staff and programme-specific services and facilities enable the incoming students to achieve the intended learning outcomes.' Explanation: The contents and structure of the curriculum enable the students admitted to achieve the intended learning outcomes. The quality of the staff and of the programme-specific services and facilities is essential to that end. Curriculum, staff, services and facilities constitute a coherent teaching-learning environment for the students.'*

The direct connection in these guidelines with NVAO standard 3 – assessment and attained exit qualifications – is mainly found in the design criteria for the assessment *programme* and the provision of information. For the requirements relating to the assessment of the exit level itself, we refer you to the Exit Level Guidelines[11] and the Testing and Assessment Guidelines[12].

Please note:
These guidelines give as broad an overview as possible of the state of affairs regarding design criteria. This means that we also focus on practices elsewhere in the higher education sector and the results stemming from these practices. These could be practices that are not currently compatible with existing AUAS policy/rules or are differently formulated within AUAS. The goal of these guidelines is to enable us to conduct well-informed debates about desired changes and developments and, if necessary, to subsequently implement these developments into rules and policy.

10   Source: http://www.nvao.net/page/downloads/DEFINITIEVE_KADERS_OPLEIDINGSBEOORDELING_< BEPERKT_22_november_2011.pdf.

11   See https://score.hva.nl/Bronnen/Leidraad eindniveau 2014.pdf.

12   See https://score.hva.nl/Bronnen/Leidraad Toetsen en Beoordelen 2014.pdf.

3. STRUCTURE OF CURRICULUM AND ASSESSMENT

Programme teams:

3.1 operate a small number of course units per study period and schedule them preferably in series rather than in parallel;

3.2 offer interim examinations at various points throughout the study period and set no more than the maximum number of summative interim examinations per study period;

3.3 make resits unattractive to students and favour integrated resits;

3.4 enable compensation within course units;

3.5 employ a variety of assessment formats;

3.6 provide regular feedback to students;

3.7   further investigate a certain percentage of failing grades;

3.8 can, under certain circumstances, issue a binding study advice of 60 ECTS.

There is a direct relationship between the number of hours that students work on their programme and the amount they learn. The more time students spend on their studies, the faster they achieve the desired level and can advance to higher levels (Chickering & Gamson, 1987; Marzano, 2007). Amongst other factors, study habits are determined by intrinsic motivation (the level of interest the student has in the subject) and social connection (whether or not they feel comfortable within the programme) (Tinto, 1975, 2012). Intrinsic motivation and social connection are important factors, but on their own they are insufficient to stimulate students to complete their studies within the nominal period. Even for motivated students, interim examinations function as deadlines that affect study habits (Gibbs, 2010; Elton & Laudrillard, 1979). Intrinsic and extrinsic motivation reinforce each another (Ryan & Deci, 2000).

Students adjust their study habits in accordance with the demands placed upon them. In the first weeks of the programme, they discover what is expected of them. If all parties involved consider it normal to pass exams at the first attempt, obtain the first-year diploma in one year and the Bachelor's degree in four years, then this has an effect on students' study habits. However, this is conditional upon the management, the lecturers and the support staff communicating this message as a team. It is important that they see themselves as having a great deal of influence over dropout rates, low academic success rates and student dissatisfaction.

3.1 NUMBER OF COURSE UNITS, PREFERABLY IN SERIES RATHER THAN PARALLEL

Explanatory notes: Course units are coherent entities of content based on particular exit qualifications. Every course unit carries a number of ECTS credits (ECTS = European Credit Transfer and Accumulation System) and is concluded with a summative[13] assessment. For every study period or semester, the programme teams schedule a small number of course units. These units can be smaller in scope in the first year than during the main phase. In the first year, it is advisable to set course units carrying a minimum of 3 ECTS and ensure that students can achieve 50 ECTS in compliance with the Binding Study Advice (BSA). During the main phase, you can set larger course units carrying anywhere from 5 ECTS to as many as 30 ECTS. Planning units in series means that students will be offered fewer disparate subjects at the same time. These course units are therefore more concentrated.

Research results
- Serial scheduling of course units within a study period or semester has a more positive effect on academic success than parallel scheduling within a study period/semester. Reducing the number of simultaneous course units by one – e.g. from four to three – increases the success rate by 7% and vice versa. Spreading out the interim examinations also has a significant effect (Jansen, 2004).
- Large course components mean there is no competition between different units (Vos, 1992,1998; Jansen, 1997, 2004).
- Large course units promote greater cohesion within the curriculum and are also a condition for allowing the results of one interim examination to compensate results of another interim examination (Cohen-Schotanus & Van Vleuten, 2010).

Substantiation: serial scheduling
There is a variety of reasons to schedule education in series via large course units:
- It prevents units from competing against one another. Students do not have to divide their attention between multiple units and can focus on a single subject.
- Students have greater motivation to pass larger course units as a failing grade will cost them more credits.
- The cohesion within the lecturer teams can be organised around the large course units.
- Smaller numbers of course units result in fewer and better validated pass/fail decisions. If a student passes or fails the interim examination for a large course unit, this decision is much

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13   Definition of a summative assessment: one interim examination or multiple partial interim examinations taken during a study period that contribute to the process of deciding whether to award the student a pass or a fail for the course unit in question.

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more solidly substantiated (by multiple partial interim examinations) than it would have been in a small course unit with just one interim examination. This prevents students from being tripped up by a single course component or falling victim to a poor-quality interim examination.
- A small number of large course units can help to simplify administration (SIS), quality control and operations.

Experiences from recent years show that successful programmes tend to have course units of between 5 and 30 ECTS. A few examples:
- Maximum of 10 course units per year (UvA, Groningen University of Applied Sciences);
- 8 modules carrying 7.5 ECTS each, two in parallel, study periods of 10 weeks (Utrecht University);
- Modules of 7.5, 15 and 30 ECTS, maximum of two in parallel, study periods of 10 weeks (HAN University of Applied Sciences).

3.2 NUMBER AND DISTRIBUTION OF INTERIM EXAMINATIONS

Explanatory notes: Interim examinations and partial interim examinations are not only scheduled at the end of study periods or semesters, they are also spread across the period in question. The scheduling depends on the structure of the study period, the teaching concept and the number of course units (see Chapter 9 for a number of detailed examples). The distribution of the interim examinations requires the use of all weeks of the year. Interim examinations during study periods will be scheduled at times of the week – such as Monday morning – that will prevent competition between exam preparation and teaching hours. When the number of course units is limited, the number of interim examinations per study period is also limited (see previous section).

Research results
- When interim examinations are optimally spread out, students spend more time on their studies and their participation levels increase, resulting in greater academic success (Starren, 1990 in Cohen-Schotanus, 2012).
- When interim examinations are scheduled too close together, they compete for the students' self-study time (Jansen, 1996; Vos, 1998). If students need only prepare for one interim examination at a time and have to do exam preparation every week, then they study more regularly. To ensure greater academic feasibility, it has been shown that students require sufficient preparation time for every interim examination and that the interim examinations must not compete with each other.

Substantiation: managing study habits

Study habits can be influenced by means of targeted scheduling of interim examinations. If a programme is structured into 10-week study periods consisting of 7-8 teaching weeks followed by 2-3 assessment and resit weeks, then students won't work as hard in the first few teaching weeks as the exams are a long way off. Most of them will only start to work harder in the weeks running up to the examinations. Due to multiple examinations being scheduled in the assessment weeks, resits often being required and students underestimating the amount of preparation time needed, many students will find themselves with too much to do in too little time. As a result, they will pick and choose, studying harder for particular examinations and neglecting others. Some students choose not to prepare for certain exams as they can resit them very soon. The study habits induced by the examination schedule result in too many students failing exams due to insufficient preparation. Failing examinations damages motivation. It also means students have to spend extra time preparing for a resit. If the resit coincides with new units or other interim examinations, then the time pressure is further increased and the student gets trapped in a vicious circle of having too little time for their studies, putting off resits until the next academic year etc. As a result, more students unnecessarily drop out of their programmes and fewer students pass their first-year examination within one year (for further information, see Section 5.3: Student Counselling). In many cases, spreading out interim examinations requires the content of the curriculum to be restructured. For these purposes, a variety of methods exist. For more information, see the examples in Chapter 9.

Together, the summative partial interim examinations must cover the learning objectives of the course unit. The way this must be done depends on the programme's teaching concept. Some programmes have their students complete weekly assignments. Other programmes set, for example, one summative partial interim examination every three weeks. Regardless of the teaching methods used, the assessment programme must be designed to ensure that students regularly devote time to their studies and that they have enough time to optimally prepare for every partial interim examination. The goal of every programme team is to prevent students with 'normal' study habits from having to take too many interim examinations in too little time, resulting in competition between interim examinations. Then what is the optimum number of interim examinations per study period or semester? There is no simple or universal answer (see 3.10). The programme team itself must make a substantiated decision on this matter. This decision depends on the number and scale of the course units, the type of examinations and the learning objectives. Academic feasibility must be the key factor in this decision. In the first year, programme teams can choose to schedule more interim examinations than in the main phase.

3.3 RESITS

Explanatory notes: Resit opportunities are limited. Possible arrangements include one or two resit opportunities per academic year, a maximum number of resits per student or attaching conditions to resits. Resit policy at AUAS sets a maximum number of one resit per academic year. Another possibility to reduce the number of resits is the creation of an integrated resit for multiple partial interim examinations. The integrated resit will consist of a single interim examination rather than one resit for each partial interim examination. It is vital that resits do not disrupt the regular curriculum: they must therefore be conducted outside the 40 regular academic weeks. Scheduling possibilities for resits therefore include the period after the Christmas holidays, during the spring holidays or after study period 4. With the latter option, the issuing of BSAs must be taken into account.

Research results
- Research shows that a combination of measures is required to ensure that students who are sufficiently motivated and devote sufficient time to their studies pass their exams at the first attempt. These include:
  - expecting students to progress within the nominal time period;
  - spreading out the interim examinations;
  - introducing the possibility of compensation;
  - establishing strict resit regulations.

Other research results:
- The first interim examination must not be seen as 'optional' (Ruijter & Smit, 1995).
- Resits should be an unattractive option to students and resit opportunities should be limited (Jansen, 1996; Van der Drift & Vos, 1987).
- The more resits students are allowed to take, the lower the academic success rate. Resits during study periods result in competing interests, reducing the quality of the students' preparation for educational activities (Janssen, 1996).

Substantiation: now or never

The best way to influence study habits is via the now-or-never principle (Cohen-Schotanus, 2012). By significantly restricting resit opportunities, making them a less attractive option or attaching conditions to them, students are motivated to do their very best to pass the interim examination at the first attempt. One of the necessary conditions for this is that the quality of the interim examinations must be systematically evaluated in order to prevent an unjustly high percentage of

failing grades due to a poor-quality interim examination[14]. Strict resit rules discourage students from putting off exam preparation. The point of departure is that students who do their best should pass the interim examination at the first attempt.

Different varieties of the now-or-never principle have been applied across the Netherlands.
- Erasmus University Rotterdam combines a number of measures, including a standard BSA of 60 ECTS, small-scale and student-activating teaching within large course units, strict monitoring of assessment quality and the opportunity to take a maximum of two resits during resit week in July.
- Utrecht University employs small-scale and student-activating teaching within large course units (two parallel programmes carrying 7.5 ECTS per study period), a pass mark of 6.0 and a rule that students can only take resits if they achieve a grade of at least 5.0 and have demonstrably participated in the teaching activities. The resit consists of a remedial examination conducted immediately at the end of the study period.
- The Physiotherapy Department at Zuyd University of Applied Sciences employs a relative pass mark (Wijnen et al., 1992) and offers students the opportunity to complete a remedial examination (dropout rate during first year: 10-15%).

3.4 COMPENSATION

Explanatory notes: If course units make use of partial interim examinations, then it is preferable that these can be compensated. This arrangement is well-suited to larger course units. One condition is that the course unit must be one cohesive entity so that compensation does not result in gaps in specific and necessary competencies. Curricula with larger course units are more cohesive and transparent and give students a better overview of their studies. Compensation *between* course units is prohibited by the Dutch Higher Education and Research Act (Wet op het hoger onderwijs en wetenschappelijk onderzoek, WHW).

Research results
- Compensation results in faster academic progress (Rekveld & Van Starren, 1994, Van den Berg, 2002).
- After the Faculty of Medicine in Groningen implemented a compensatory scheme, the average study duration decreased by three months (Cohen-Schotanus, 1994).
- Compensation does not lead to loss of quality. Research at the Faculty of Medicine in Groningen indicates that no standard 'problematic' subject exists that requires more compensation than others (Cohen-Schotanus, 1994).
- Compensation has no effect on the dropout rate in the first year. Compensation opportunities are mainly granted to students who would also have completed their first year without any compensation. However, they require fewer resits (Arnold & Van den Brink, 2009).
- Students who require multiple attempts to achieve a grade that can be used for compensation perform worse in later academic years than the control group (Arnold, 2011).

Substantiation: compensation of failing grades
The opportunity to compensate failing grades with high grades in different partial exams encourages students to 'stay in the race'. They strive to make up for failing grades in order to achieving a passing overall grade. Compensation enables students to make up for 'one-off' failing grades. The opportunity to compensate failing grades with high grades in different partial exams prevents students from being tripped up by particular examinations. Research shows that implementing a compensation scheme increases academic feasibility without lowering academic levels.

3.5 VARIETY OF TESTING FORMATS

Explanatory notes: Academically feasible programmes include a variety of testing formats. This relates to both the function of the test (summative or formative) and the testing methods[15]. Formative tests give the student feedback on their academic performance so far (for further information, see Section 3.6: Feedback). The variety of testing formats ensures that students can demonstrate their competence with regard to various learning objectives. Implementation of *constructive alignment* (Biggs & Tang, 2011) – an internationally recognised method for devising teaching activities – is a good way of ensuring that the assessments are optimally compatible with the teaching conducted. *Constructive alignment* is based on the insight that study habits can be influenced by consistency of content, leaning activities and assessment of course units.

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14   More information about compensation, resit rules and monitoring of assessment quality can be found in the Testing and Assessment Guidelines and on the Score website (www.score.hva.nl).

15   For an explanation of 15 frequently used testing formats, visit www.score.hva.nl.

Research results
- A comparison of two programmes with differing degrees of alignment has shown that aligned education results in students adopting an in-depth learning style rather than a superficial learning style (Wang et al., 2012).
- A literature study has shown that interim formative testing has a positive effect on the results of summative interim examinations (Bruijns, 2014).

Substantiation: constructive alignment
Variety of testing formats contributes to academic feasibility, enabling students to demonstrate their competence with regard to various different learning objectives. To ensure a programme's academic feasibility, it is important that the testing is compatible with the teaching that precedes it. During the assessment, students must not receive any unwelcome surprises. The interim examination must be a valid and reliable reflection of the course unit. The exit qualifications (competencies and BoKS[16]) at the final attainment level serve as the point of departure for *constructive alignment*. The learning objectives of each course unit are recognisable and demonstrably derived from the course unit. The type of learning objectives and their level are decisive in selecting the format and content of the interim examinations, assessment criteria and standards. They are also decisive in selecting the format and content of the education and therefore shape the activities of both lecturers and students. In this way, consistency – or *alignment* – is achieved between teaching and assessment, with the exit qualifications playing an indicative role[17]. The diverse learning objectives automatically result in a variety of testing formats.

3.6 FEEDBACK
Explanatory notes: Feedback is continual critical dialogue between lecturers and students, and among students, about the learning objectives that will be assessed, the assessment criteria and the standards. There are three types of feedback:
- feed up – where am I heading, how will I be assessed?
- feedback – how did I perform during the assessment, what progress have I made?
- feed forward – how should I continue, what strategy should I adopt for my further development?
Lecturers provide students with regular feedback by means of formative testing.

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16   Professional and educational profiles at the national level differ with regard to the formulated exit qualifications. More and more national profiles contain not only competencies, but also knowledge bases, core skills and professional attitudes (body of knowledge and skills, BoKS).

17   For further explanation of constructive alignment,
      see https://score.hva.nl/docent/keuze_toetsvormen/Paginas/default.aspx.

Research results
Regular, practical and timely feedback[18] is a decisive factor for academic success. Students stay motivated when they are given regular and timely feedback about their academic progress and adjust their study habits in accordance with the feedback. The relationship between feedback and academic success has been demonstrated within higher education environments both in the Netherlands and abroad (Joosten-ten Brinke & Sluijsmans, 2012; Boud, 2009; Hattie & Timperley, 2007; Nicol & MacFarlane-Dick, 2006; Gibbs & Simpson, 2004; Hattie, 2009; Black & William, 2003).

Substantiation: assessments
In order to educate students to become professionals with the ability to reflect, it is important that they learn to assess themselves and to design their own learning process (metacognition, learning to learn). Students develop these skills by means of the feedback provided by lecturers and fellow students. Feedback should challenge the recipient to reflect on their learning process and academic results in relation to clearly defined goals (*self-assessment*). The greatest effects are achieved when the feedback is in the form of encouragement rather than instruction, when it focuses on issues within the student's control, and when it is provided at a decisive moment for the student (Hattie & Timperley, 2007, Ambrose, 2010, Reedijk & Huisman, 2012).

Feedback should contribute to students feeling in control and confident that they will pass the interim examination (Bandura, 1997). If an initial formative test is conducted for every subject in the first year in addition to regular (formative) testing and feedback, students quickly gain insight into the requirements set by the programme and what action they can take in order to meet them. It is particularly important that regular formative testing is conducted to provide support with material that students find the most problematic, such as statistics, maths and arithmetic. Then, once the students have sufficiently developed these skills, a summative test can be taken.

3.7 FURTHER INVESTIGATION IN THE EVENT OF A PERCENTAGE OF FAILING GRADES
Explanatory notes: By means of structured and systematic screening and evaluation of interim examinations beforehand (design), straight after the examination (initial results) and subsequently (result analysis), the programme ensures that the interim examinations comply with the quality requirements. During improvement of academic feasibility, priority is given to improving the teaching or the interim examinations of course components with high failure rates.

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18   For further information about feedback, see the Testing and Assessment Guidelines
      (https://score.hva.nl/Bronnen/Leidraad Toetsen en Beoordelen 2014.pdf).

Ensure that there are no interim examinations with an excessively high failure percentage (Berkel et al., 2012).The quality of interim examinations can vary, which results in undeserved study delay. Assuming good-quality teaching and well-prepared students, at least 70% of students should be able to pass an interim examination (Cohen-Schotanus, 1994, 1995).Students who know what is expected of them achieve faster academic progress if the interim examination properly reflects the teaching that preceded it (Bruinsma, 2003).

Substantiation: reliable assessment
Interim assessments are important moments for both students and lecturers. For this reason, it is important that students are not awarded unjust passes or fails. In itself, the pass or fail that students achieve for interim exams does not say much about the student's suitability for the programme, let alone the profession. The student's suitability or lack thereof can only be determined by means of a representative assessment programme. There is a number of ways to protect students from unreliable individual examinations:
- employ a relative or combined pass mark;
- organise the teaching into large course units with the interim examination comprising a number of partial interim examinations that can compensate one another;
- validate/invalidate poor-quality interim examinations following further investigation in the event of a fail rate of more than 30%;
- systematically evaluate the quality of the assessment programme and the individual interim examinations in order to prevent an undeservedly high number of failing grades[19]. These measures help departments to ensure valid and reliable assessment of students and prevents unnecessary failing grades that can result in study delay.

3.8 BSA STANDARD OF 60 ECTS
Explanatory notes: By establishing a BSA standard of 60 ECTS in the first year, students are motivated to complete the year within the nominal time period and begin their second academic year without any study delay.

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19   More information about pass marks, compensation, resit rules and monitoring of assessment quality can be found in the Testing and Assessment Guidelines and on the Score website (www.score.hva.nl).

Research results
Research shows that raising the BSA standard to 60 ECTS significantly improves the students' academic progression in comparison with previous cohorts (Baars et al., 2013).

Substantiation: BSA standard
The explanation of the aforementioned research result is that students work towards the standard and that suitable students will achieve any standard. Based on this insight, Erasmus University Rotterdam has set a BSA standard of 60 ECTS. Increasing the BSA standard significantly improves academic success in both the first year and the main phase as all students begin the main phase without any study delay. The BSA of 60 ECTS is conditional on optimal academic feasibility of the education and prevention of flaws in the teaching, educational structure and assessment process that can cause suitable students to fall short of the standard. A BSA standard of 60 ECTS must therefore be combined with a number of measures to prevent students from unnecessarily dropping out or incurring study delay. The programme must therefore have its affairs in excellent order. These measures concern aspects such as organisation of education into large course units, assessment and resit rules and assessment-quality control. Within AUAS, we employ a BSA standard of 50 ECTS. If the programme team has its affairs in good order, then the possibility of experimenting with BSAs can be considered (subject to approval from the Executive Board).

3.9 TEACHING-LOGISTICS RECOMMENDATIONS
Educational principles and logistics sometimes conflict with one another. The ideal educational solution can sometimes be logistically impractical or require too much money and/or effort to implement. In this section, we give a more detailed explanation of this issue in relation to the curriculum and assessment. These explanatory notes are not exhaustive: other solutions are also possible. At each location, programme teams and support staff must discuss smart organisation of high-quality education and assessment (see Chapter 7 for further details). The goal of these teaching-logistics recommendations is to smartly realise robust and academically feasible education for our students. In this way, we wish to use the resources available to us as effectively as possible.

Structure of curricula
From the perspective of teaching logistics, it is advisable to keep the programme structure the same over a number of years. The annual changes relate to the content of the course unit, not to the teaching methods, assessment formats, number of contact hours or number of ECTS.

Even minor changes to a programme have major consequences for logistical and ICT processing (consider conversion tables, for example). Reviews of the curriculum, including teaching methods and assessment formats, take place once every two years at the most. This working method helps ensure stable and robust curricula (see Chapter 4 for further details).

Do not break up the regular timetable series with interim examinations
Summative interim examinations for an entire cohort of students break up the regular timetable series, which negatively affects the robustness of the curriculum. Alternatives that do not break up the regular timetable series include:
- Testing in class: the lecturer is given the same classroom for ten weeks and conducts both lessons and interim examinations in this classroom.
- Using formats other than written knowledge tests, which do not require a separate and controlled environment. Examples include presentations, essays or projects.
- Conducting the test in a different location, for example in the case of written knowledge tests for all students within a large study programme. Due to the extra costs involved, this method can only be used to a limited degree.
- Conducting the tests in the evenings.

Fewer resits
From the perspective of teaching logistics, the organisational robustness can be increased by means of fewer resits, fewer resit periods, and scheduling resit periods to avoid them interrupting the regular curriculum, such as immediately after the Christmas holidays, during the spring holidays and immediately following study period 4. In some cases, tests can also be conducted in the evening.

Conditions for resits
Setting conditions for resits – i.e. a minimum grade or attendance requirement – requires careful registration and can result in many exemption requests. This results in a great deal of extra logistical work and additional risk. From a logistical perspective, the optimal scenario is that the Administration Department registers students for the first testing opportunity. Students register themselves for any resits. Registration for resits after study period 4 must be very effectively planned and communicated in connection with the binding study advice (BSA).

BSA standard
From a logistical perspective, a BSA standard of 60 ECTS will make the education more robust, as there will be no catch-up teaching, no transitional examinations, and all students will start their second academic year with a clean slate.

3.10 EXAMPLE IMPLEMENTATION
Below is an example of how the 'curriculum and assessment' design criteria could be implemented. The example is intended to give an impression of the possibilities and possible margins. This example is purely for illustrative purposes: it is not a formal guideline.[20]

Structure of the curriculum and assessment:
- 1-5 course units per study period scheduled either in series or overlapping;
- max. 1 interim examination per week and 3-6 summative interim examinations per study period, spread out across these weeks;
- integrated resits in a period in which no competition is created with the regular curriculum; compensation is possible within course units;
- interim examinations do not interrupt the regular timetable series;
- max. 50% written interim examinations, of which no more than half are in multiple-choice format;
- regular conduct of formative tests;
- investigation in the event of more than 30% of failing grades.

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20   Integrated resits: one interim examination that represents the second assessment opportunity for two or more partial interim examinations.

4. TIMETABLE STRUCTURE

4.1 Programme teams:
- use all 40 weeks for education and assessment;
- operate a weekly timetable that will remain the same for at least one study period;
- operate an annual interim-examination timetable set at the beginning of the academic year.

One important cause of dissatisfaction amongst students, lecturers and support departments is opaque and unpredictable timetables. Timetables often have a complicated structure that varies from week to week and feature many interim changes. This is caused by, amongst other reasons, educational structures designed from the perspective of individual lecturers and course components. As every lecturer generates their own educational structure for their course component (arrangement of lectures, seminars, practical sessions, office hours, consultations), this results in the weeks, study-periods and semesters being structured inefficiently from the perspective of students and lecturer teams. The unpredictability is caused by the many interim changes resulting from unanticipated changes to the curriculum. This makes the schedule highly dependent on the availability of lecturers, with people sometimes unjustly claiming acquired rights. Due to the countless interdependencies within the timetable, a single adjustment can cause a domino effect. By optimising the educational structure at a higher level (week, study period or year), ensuring replacement lecturers in the event of absence, prohibiting interim changes and implementing curricular innovation through content rather than through the organisational structure, we can create a robust educational structure. For these purposes, curricular innovation must be planned at a much earlier stage and the lecturers must make themselves available for the timetable to the full extent that AUAS can require of them in accordance with their contract.

4.1 TIMETABLE

Explanatory notes: In order to realise a robust and academically feasible curriculum, teaching and assessment activities are conducted in all weeks of the study period. The timetable does not include any self-study weeks. When interim exams are spread evenly, then separate examination weeks are hardly necessary. However, certain practical sessions, interim examinations, events, assessments, project completions etc. may still have to be planned in a separate week for organisational reasons. There is no competition between resits and first testing opportunities or between resits and teaching weeks. The contact hours and self-study hours are spread evenly. A

robust and academically feasible curriculum has a fixed and recurrent weekly structure of lectures, seminars, practical sessions etc. This structure is designed in such a way as to ensure an optimal distribution of contact hours and self-study hours. The structure is maintained for as long as possible, remaining the same for at least one study period.

The annual interim-examination timetable, featuring the specific dates, is published before the beginning of the academic year and checked in advance to ensure optimal spread and variety of interim examinations.

Design criteria based on research
- Contact hours are spread across five days. This evenly distributes preparatory work across the whole week and prevents peaks and troughs in the study load. There are therefore no free weekdays during the course (Vos, 1992, 1998). Students usually prefer one free day during the week.
- The study load is evenly distributed throughout the year (40 hours gross per week * 42 weeks) (Vos, 1992, 1998).
- The study load is evenly distributed throughout the week (8 hours gross per day) (Vos, 1992, 1998).
- Contact hours and self-study hours are evenly distributed throughout the week/year.
- The optimum level is 12 60-minute periods of study time per week (Vos, 1992, 1998).
- The self-study hours are visible (in the curriculum and course, e.g. the required preparation time for practical sessions, seminars, lectures etc.) The scheduling of contact hours therefore takes into account the self-study time required for assignments (Vos, 1988; Jansen, 1996).
- The lecturer will use the preparation-feedback model as a point of departure for structuring their course. Self-study time is reserved prior to feedback sessions (lectures, seminars, interim examinations) (Vos, 1998).

From: Ruis (2007), Checklist for academic success in higher education (ICLON checklist).

Other research results:
- No competition between two or more interim examinations or between an interim examination and the curriculum (Vos 1992, 1998; Berkel et al., 2012).

Substantiation: fixed timetable structure
A robust educational structure begins with the design of a fixed structure of lectures, seminars, practical sessions, assessments etc. for the teaching weeks, study periods and semesters. Within this structure, it would be ideal if the department arranges the teaching, self-study time, feedback and assessments to follow each other closely as this encourages students to get straight to work. This helps prevent excessive study loads or absence at particular times of the week and/or study period.

A fixed timetable structure makes it clear how the various programme components are interconnected. The structure is the point of departure for the distribution of the material, the deployment of lecturers and the reservation of lecture rooms. Students also conduct studies in other locations, e.g. for minors, excellence programmes or transfer programmes. The dependence of the organisation on the availability of individual lecturers can be reduced by allowing the teaching to be performed by lecturer teams, who collectively ensure that no lessons are cancelled. Short-term replacements can be provided within the programme team, e.g. by lecturers taking over each other's lessons or exchanging teaching hours. In this way, the timetable structure remains intact.

Interim changes to the educational structure and yearly redesign and restructuring can cause instability and work pressure. In the worst-case scenario with regard to robustness, eight programmes can run concurrently (old and new 1st, 2nd, 3rd and 4th-year programmes). The following factors can provide stability and ease work pressure:
- operation of a systematic annual cycle, in which the educational structure for the next academic year is published by the end of January in the preceding academic year. This should provide enough time to finish off all of the details regarding individual duties, to advertise and fill vacancies and to prepare new lecturers.
- maintaining the same annual educational structure for at least two years (or preferably four years). This enables thorough evaluation and, if required, timely adjustment.

4.2 TEACHING-LOGISTICS RECOMMENDATIONS

In the quality standards for timetabling[21], the following time limits are proposed:

- Programme details ready: 1 February
- SIS set up: 1 April
- availability details ready: 1 May
- Teaching and Examination Regulations ready: 1 May
- course catalogue ready: 1 June
- timetable ready: 1 July
- syllabus ready: 1 July.

From a logistical point of view, the focus is on the quality of the student timetables. For this reason, the support staff will strive for optimal use of lecture rooms at each location or campus. This works best when lecturers are available from the 1st hour to the 12th, fixed for at least one semester. For part-timers, adjusted availability is agreed in line with the scale of their position following consultation with the team leader/programme manager.

One condition for realising a robust timetable is the operation of fixed timetable series per study period: groups have the same structure for ten weeks, preferably at the same time each week and in the same classroom. To limit the need for rescheduling, blocks of 2x50 minutes are preferred.

Rescheduling only takes place if there is no other option and in compliance with the agreed procedure – for example in the event of long-term sickness of a lecturer. In such cases, the point of departure is that other students' timetables should not be affected. In the event of sudden and short-term absence, the point of departure is that lecturers will cover each other's lessons. In the event of the long-term absence of a lecturer, a replacement will be sought who is available to the greatest extent possible at the times that the absent lecturer was scheduled to teach.

Fixed meeting blocks hinder optimal scheduling for students as this will result in many lecturers being unavailable at the same time. Using hours 11&12 for this purpose is a possible solution to this problem. Every programme team can seek convenient moments and locations and/or devise other creative solutions themselves in consultation with the support staff. For example, on one occasion, during a two-day lecturers' meeting, the teaching was conducted by students: all lessons took place as scheduled with students or guest lecturers taking the class. Also,

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21   See https://beleid.mijnhva.nl/nl/Beleidsdocumenten/kwaliteitsstandaarden roostering.pdf.

designating areas in the building that are recognisable to students and lecturers as 'their' spot facilitates the desired informal consultation.

For the purposes of robust education, the timetables must be published two weeks before the start of the study period or semester. From the moment of publication to the end of the study period/semester, no more than 20% of the timetable can be adjusted[22]. For the purposes of academically feasible education (due to the domino effect), this limit should be much lower in the future. The annual interim-examination timetable is published at the start of the academic year.

In order to make this possible, we assume that lecturers will be maximally available for the timetables within the agreements as set out in the Collective Labour Agreement.

4.3 EXAMPLE IMPLEMENTATION

Below is an example of how the design criteria for timetabling could be implemented. The italicised text in the first two points are established policy from the 'Contact hours at AUAS' memorandum[23].

Example timetable
- There are *no free weeks* and the educational structure (application of teaching methods and assessment formats) changes no more than once every two years.
- The interim-assessment timetable, including the dates of all summative interim examinations, is determined prior to the start of the academic year.
- A fixed student timetable per study period *featuring an average minimum of 14.4 50-minute lesson hours (=12 clock hours) in the first year and 504 study hours* in the first year of the main phase.
- Blocks of hours are used.
- Lecturers can replace each other and are widely available.
- Students are assigned to fixed groups of eight or a multiple thereof: 16 – 32.
- Scheduling is conducted for group sizes of eight students or more.

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22   Quality standards for timetabling.
23   See https://beleid.mijnhva.nl/nl/Beleidsdocumenten/Contacturen definitie en verantwoording.pdf.

5. EDUCATIONAL STRUCTURE

Programme teams:

5.1 provide small-scale teaching and give their all to encourage students to actively participate;

5.2 make optimal use of *blended learning*;

5.3 integrate student counselling into the curriculum.

5.1 STUDENT-ACTIVATING TEACHING

Explanatory notes: The majority of contact hours consist of small-scale and student-activating teaching and optimal use of DLWO will be made in order to convey the material (*blended learning*).

Design criteria based on research by Wijnen, et al. (1992) – To do or not to do? Advice regarding the academic feasibility of higher-education programmes:

- The number of lecture hours per course is usually around 20% of the total study hours.
- Daily timetables more frequently feature two hours of lectures rather than larger multiples of two.
- Lectures demonstrate the cohesion of the new material, give further explanation of notoriously problematic material, provide feedback on self-study and structure the subsequent study hours.
- There are more contact hours in which students interact with the lecturer (seminars, practical sessions, Q&A sessions) than there are lecture hours.
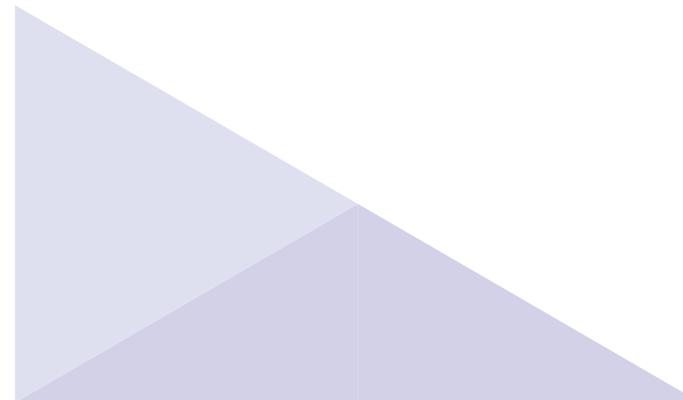
Design criteria based on research by Ruis (2007) – Checklist for academic success in higher education (ICLON checklist):

- Set achievable goals for the course and the programme.
- Conduct evaluations to optimise the students' learning processes.
- Be quick to give students affirmation when they are making progress.
- Give regular feedback about academic progress, e.g. in the form of exercises or formative tests.
- Implement mastery learning (Bruinsma, 2003).
- Limit explanation in favour of student-activating teaching methods (Jochems, 1990; Van Dijk, 2000).
- Lecturers give instructions to students in the following ways (Jochems, 1990):
- Give them clues (what they should learn, how they can approach it).
- Promote active student participation by setting assignments and exercises in combination with guidance and progress monitoring.
- Set students on the right track by quickly correcting mistakes in their verbal and written input.
- Conduct regular progress monitoring in which the lecturer establishes whether the student is putting the work in.
- Carefully prepare the teaching by means of effective teaching plans and organisation of lessons.
- Create social cohesion amongst students, by means of, for example, fixed year groups/ subgroups, peer tutoring, social activities and providing meeting space (Tinto, 2004; Prebble et al., 2004).
- Give students opportunities to strike up contact with lecturers and students in the same programme by means of sufficient contact hours, office hours, informal contact opportunities etc.
- Set an attendance requirement for first-year students.
- Avoid a non-committal culture amongst students. For example, set an attendance requirement or strict deadlines.

Substantiation: student-activating education
Many higher-education institutions use small-scale, student-activating teaching as a design criterion. When students can actively process the material and are given regular feedback on their performance, the material is more likely to sink in (Chickering & Gamson, 2007; Bransford et al., 2000). An additional effect of this design parameter is that it creates more opportunities for social and material-related bonding. Lecturers who see students for several hours per week

and know their group well can also play a role in student counselling. Various programmes set an attendance requirement (or 'active participation') for first-year students and for meetings in which interaction (supervised or unsupervised) is a condition for realising the learning objectives (e.g. practical sessions).

5.2 BLENDED LEARNING

Explanatory notes: Blended learning is a mix of online and face-to-face teaching and learning activities that are time and location-independent and can take place within or outside the institution. Students can actively work on educational material individually or interactively together with each other and the lecturer. The walls between the physical and virtual world are fading, creating a more *blended* environment.

Research results
- Digital communication media enable a sophisticated mix of learning activities in a virtual and physical environment (Collins & Moonen, 2001).
- *Blended learning* helps to reinforce a number of principles of effective teaching (Chickering & Gamson, 1987).
- However, it is important that *blended learning* is used correctly. For example, research shows that giving direct feedback has a positive effect on students' academic progress (Joosten-ten Brinke & Sluijsmans, 2012; Boud, 2009; Hattie & Timperley, 2007; Nicol & MacFarlane, 2006; Gibbs & Simpson, 2004; Hattie, 2009; Black & William, 2003).
- Another principle of effective teaching is student-activating learning (Hattie, 2008). One example of this is time-on-task assignments.
- These can be supported with ICT by means of student response systems (Lantz & Stawiski, 2014).

Substantiation: student-activating learning with ICT
ICT is a tool that facilitates student-activating learning. It enables contact hours with students to be intensively focused on the active processing of the material.
1. By using tools such as student response systems, the lecturer can get a better idea of the student's prior knowledge, gauge opinions, check that their explanations have been understood and encourage 'quieter' students to get more involved. These applications allow lecturers to make meetings more interactive and activate the students more.
2. ICT also enables lecturers to give feedback straight away. For formative online tests, feedback can be 'prepared'. As soon as the students have finished their examination, they can get

feedback on their results. By setting diagnostic online tests with automatically generated
feedback, lecturers are able to organise the feedback more effectively and efficiently.

3. The lecturer can post videos demonstrating particular skills or concepts, which the students
   can then study in their own time and in a location of their choosing. By using *serious games*
   and simulations, students can practice certain practical skills in a safe environment. Lecturers
   monitor the students' study habits.

4. They can then prepare students for seminars by means of online lectures and informative
   clips. This provides students with a great deal of time and location-independent material. This
   considerably reduces the need for teaching formats involving information transfer. During
   seminars, the lecturer and students can initiate dialogue on the material and its meaning, a
   teaching method known as flipping the classroom. The objective is the realisation of in-depth
   learning.

5. By means of DLWO, lecturers can create a learning environment that gives students more grip
   on their studies, with all of the material and information about the learning activities stored in
   one place.

6. Digital learning environments generate a great deal of data. This data can be analysed using
   methods such as learning analytics and visual displays of the results can be created to provide
   feedback to students and lecturers. This means, for example, that if a student is giving off signs
   that he/she may drop out, the department can detect the problem at an earlier stage.

5.3 STUDENT COUNSELLING

Explanatory notes: Student counselling comprises all of the measures and activities offered by
the programme in order to provide sufficient guidance tailored to individual students[24]. Student
counselling consists of supply and demand-oriented:

- **academic counselling,** which focuses on academic progress, decision-making and planning
  processes to ensure students progress through their study programme as smoothly as possible.
- **career counselling,** which focuses on the professional context, with the goal of developing
  the student into a professional.
- **personal counselling,** which focuses on resolving personal issues that may hinder the
  student's academic progress.

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24   Counselling is a broad term that encompasses multiple forms of guidance, such as coaching, support,
     supervision, tutoring and mentoring.

Various people are involved in student counselling in the role of lecturer, student counsellor[25] or
specialist[26]. In addition, students themselves often play a role in counselling junior students in
the capacity of tutor or student mentor. Student counselling is therefore not simply the domain
of individual student counsellors, it is the responsibility of the entire lecturer team. By assigning
duties and responsibilities to all parties involved and coordinating matters within the lecturer
team, a consistent student-counselling system can be established.

Research results

- Student counselling helps to strengthen bonds, and stronger bonds result in better academic
  progress and lower dropout rates (Tinto, 1975; Tinto, 2012).
- A direct link to academic success has not been demonstrated, as proved by various studies
  (Israëls, 1983; Meerum Terwogt-Kouwenhoven, 1990; Ruis, 2007).
- However, one factor that does have a positive effect on academic success is the degree of
  control a student has over their development, an aspect to which student counselling makes an
  important contribution (Te Wierik, Beishuizen, & Van Os, 2014).
- Various studies conducted into study/career advice show that two types of intervention
  consistently prove effective: (1) experience based on your own questions (practice and
  question-oriented) and (2) consultation on this matter with regard to the future (Meijers,
  Kuijpers & Winters, 2010).
- Without dialogue, counselling methods and career instruments make little contribution to the
  development of professional competencies (Kuijpers, Meijers & Gandy, 2010).
- One study shows the importance of student counsellors building a strong bond with the
  students, providing targeted feedback and examining what specific students really need in
  order to learn and progress (De Kleijn, 2013).

Substantiation: effective student counselling
During expert meetings with AUAS students and lecturers, investigation was conducted into the
needs of students and lecturers as well as good and bad student-counselling practice (the Student
Counselling Project, 2014). Based on this information, the following principles of effective student
counselling were established:

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25   There are many synonyms for the role of student counsellor, such as study counsellor, student career
     advisor, mentor etc. Here, we use the term 'student counsellor' to emphasise that the student is the
     central focus of the counselling.
26   Psychologists, external student counsellors etc. play a role outside the programme.

1. Every lecturer plays a role in student counselling. The lecturer keeps an eye on the students' attendance, study habits and academic results. Guidance of the students while they are acquiring knowledge and conducting assignments is part of the lecturer's regular duties. Skills such as planning and learning to study/reflect are not taught separate from the curriculum, but integrated in it as much as possible. This means that every lecturer is capable of identifying problems and then taking action to resolve them. If the counselling transcends the lecturer's field of expertise, they will report the signals to the student counsellor concerned. It is important for all lecturers to realise that they have a role to play in student counselling, as counselling is only effective when it is a collective effort. The likelihood that the student can make use of feedback and advice is increased if it is received within different contexts and from different people. Coordination between lecturers and student counsellors is therefore crucial.

2. Every student will be assigned a student counsellor for the duration of the programme. The student will consult with the student counsellor regarding their academic progress and professional/personal development. This counselling transcends curricula: experiences and academic results from various courses will form the input for the dialogue. Student counsellors do not assess the students, they help them to make the right decisions. It is therefore no easy task to assign credits to a counselling process. The student's competencies will be assessed in other areas[27]. If there are multiple student counsellors across different years and/or multiple counselling levels within the programme, then a 'warm transition' must take place.

3. Student counselling will be individually tailored to the greatest possible degree. Student counselling focuses on what a specific student needs in order to progress. If the counselling is truly focused on the needs of the student, then they will feel that the department is paying attention to them, which strengthens the bond. The student will feel that at key moments in their academic career, they can call upon the right support. In the first year, the initiative for participating in and conducting student counselling must mainly be taken by the department, while in the main phase, the initiative shifts increasingly to the student. In this way, students learn to take more and more responsibility for their study habits. If necessary, the student counsellor will refer the student to specialist experts. For this purpose, the student counsellor will have access to an up-to-date list of AUAS/UvA specialists in the field of student counselling.

4. The student counselling website[28] features an example model with key moments in a student's academic career, including the corresponding objectives and the structure of counselling. This can serve as a basis for programme-specific student counselling.

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27 If a programme includes student counselling as part of a module, e.g. 'academic-career development' or 'professional development', then the roles of counsellor and assessor will be separated.
28 https://studentbegeleiding.mijnhva.nl

5. Student counsellors see their students regularly and in a variety of contexts. To ensure sufficient and tailored counselling, it is important that the student counsellor has a clear overview of the student's performance. Therefore, the counsellor should preferably be a lecturer and/or project supervisor of the students concerned and should coordinate their counselling with the other lecturers involved.

6. Student counsellors are skilled and constantly working on their own further professionalisation. They are trained in counselling skills and have a clear picture of the student, their studies and the profession they aspire to. The competencies possessed by student counsellors are recorded in the 'student-counsellor profile', which can be found on the student-counselling website.

However, the above principles do not imply that there is a fixed blueprint for good student counselling. Programmes, students and lecturers are all individually different, and there is no one-size-fits-all approach that can take these differences into account. When organising student counselling, programmes can make use of supply and demand-oriented training provided by the AUAS Academy, participate in the student-counselling network and/or consult the student-counselling website for best practices, tools and tips. These resources help to concretise the principles of student counselling.

5.4 TEACHING-LOGISTICS RECOMMENDATIONS

Student-activating education
- From an educational perspective, attendance and active participation in lessons can be a requirement. This is certainly the case in practical sessions. In other cases, too, it can also be relevant to the realisation of learning objectives. However, from a logistical perspective, adequate registration of attendance requirements and participation is problematic, as it results in extra work (registration, development of catch-up assignments) and is prone to error.

Student counselling
- Every student has a fixed student counsellor each year.
- Meetings between the student counsellor and their students are scheduled for groups of eight or more students.
- The student counsellor has access to optimal provision of information about their counselling students.

Blended learning
- Within AUAS, lecturers can make use of:

- lecturer labs for the development of digital material;
- the expertise of the library for use/reuse of material (copyrights, creative-commons licence, e-reader);
- the expertise and training provided by the AUAS Academy with regard to ICT-supported blended learning or student-activating teaching;
- the expertise of the web-lecture team for creating web lectures and 'flipping the classroom';
- the expertise of ICTS for the use of applications (videos, learning analytics etc.) in the digital learning and working environment (DLWO).
- Teaching material:
- A lot of teaching material is in digital form. A repository containing all educational material gives both lecturers and students an easily accessible source of information.
- Systems and technology:
- AUAS operates a uniform and secure digital learning and working environment. This coordinates systems and learning processes, which contributes to interchangeability.

In Chapter 9, you can find four examples of robust and academically feasible programming in which the design criteria are fully applied.
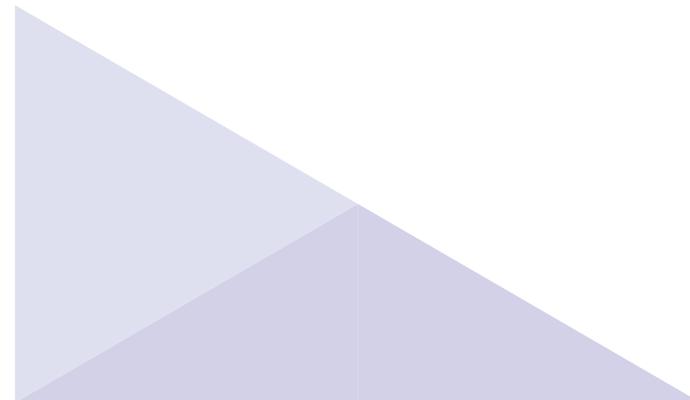
6. PROVISION OF INFORMATION

Programme teams and operational management offices:

6.1 provide consistent information from a single source via the Teaching and Examination Regulations (OER), DLWO, SIS, the course catalogue and the programme syllabi, and will ensure timely compliance with fixed dates for the provision of information;

6.2 record interim examination results in SIS.

6.1 CONSISTENCY OF INFORMATION AND TIMELY PUBLICATION

Explanatory notes: To realise a robust and academically feasible programme, information must be consistent, have a fixed format and be made available to students in a timely manner. For prospective students, this relates to information about the programme, while for current students, it includes the course catalogue, the programme syllabus, the Digital Learning and Working Environment (DLWO), the Student Information System (SIS) and the Teaching and Examination Regulations. At the AUAS, study programme, school and team levels, employees are responsible for ensuring timely and smooth provision of information.

Information provision is a broad term because everything is information, from www.hva.nl to emails or text messages from lecturers to students. One of the most frequent complaints that students have is that they receive different information from different sources. In the 2014 NSE (annual national student survey), the score for AUAS's information provision declined once again. As a result, AUAS has taken action to streamline the provision of information to students. Agreements have been made regarding which sources we use, who manages these sources and when the information in question is made available.

The legal basis for educational information is set down in the Teaching and Examination Regulations (OER), which include the specific curricula together with all regulations and agreements established within AUAS. The programme manager is responsible for the programme's Teaching and Examination Regulations. In March, the draft version of the Teaching and Examination Regulations is made available and further decision-making takes place within the programme and the school. The programme's Teaching and Examination Regulations serve as the basis for SIS, DLWO and the course catalogue. A single source-system is used for information about the programme.

Lower down in the information hierarchy, we find the programme syllabi. In the syllabi, lecturers describe the course(s) within the different study periods, including all relevant information that students need in order to take the course. Of course, this has to be in line with the information higher up in the hierarchy such as the Teaching and Examination Regulations, the course catalogue, SIS and DLWO. For example, if the course catalogue states that a course consists of lectures and seminars with a total of 25 contact hours, then the information in the programme syllabus must not differ from this. However, at AUAS, this regularly occurs in practice. The structure of the course catalogues often differs between lecturers and courses. In addition, publications posted on DLWO, sent by email or distributed in class often differ from each other. It is important that students know well in advance how their education will be structured and that all information is made available via DLWO in a timely manner, as this enables them to prepare properly.

One of the next levels in the information hierarchy is communication with students about lessons, sharing of PowerPoint documents, articles, websites etc. This is also information that students expect to find in DLWO.

Finally, there is also communication with students about operational matters, such as homework reminders, classroom changes or interesting documentaries. By conducting this communication via DLWO, all students attending the course can access the information. As well as publishing information via DLWO, lecturers can also use Facebook or WhatsApp.

Research results
- Students are well-informed about interim examinations: the number of examinations, weightings, assessment formats in relation to learning objectives (Bruinsma, 2003).
- Students receive good-quality and realistic information prior to the programme and courses, allowing them to accurately gauge how successful they would be (Prins, 1997; Elsen, 1998).

6.2 RECORDING IN SIS
Explanatory notes: It is extremely important that students have access to information about their academic progress (how many credits have I achieved so far and how many do I still need?) and results of interim examinations. The first thing a student asks after taking an interim examination is 'How did I do?' These moments are vital within the scope of quick and plentiful provision of effective feedback. SIS is the system used by AUAS to register and publish grades and to track

academic progress. It is therefore of great importance to both students and student counsellors that the results are quickly displayed in SIS, i.e. within 15 working days. This enables students to properly monitor their academic progress. Summaries from SIS show that across AUAS, approximately 30% of grades are published on SIS later than this. In such cases, lecturers say that they have informed the students of their grades at an earlier date but via another means (verbally, via the DLWO bulletin board, via email etc.) Besides being undesirable from the perspective of privacy and reliability, this also means that the student cannot check the information via SIS. Students will therefore be less inclined to consult SIS to check their academic progress, because ' the information won't be there anyway'. As a result, students stop checking whether SIS is up to date. This in turn creates the risk that a grade sent to the student via email is not recorded in SIS and is therefore not available during the graduation process. This not only applies to grades for interim examinations, but also to partial interim examinations. It is important that no parallel records are kept.

6.3 TEACHING-LOGISTICS RECOMMENDATIONS
- Within the study programme/school, maintain a fixed format for the course catalogues as well as for the programme syllabi. Ensure a straightforward final editing process within the lecturer team by appointing a colleague or editor for this purpose.
- Use the same source for information in the Teaching and Examination Regulations, SIS, course catalogues, DLWO and programme syllabi.
- Ensure a straightforward and fixed DLWO structure at the programme level at least.

From 2015, the following three principles have been agreed within AUAS:
- A single source file will be used for SIS, the Teaching and Examination Regulations, the course catalogue and DLWO.
- Information for students will be provided via DLWO.
- All interim-examination results and partial-interim-examination results will be registered via SIS: no parallel records will be kept.

7. PROGRAMME TEAMS AND OPERATIONAL MANAGEMENT OFFICES

Programme teams and operational management offices:

7.1 bear joint responsibility for the design and structure of the education and chain planning;

7.2 coordinate the organisation of educational and assessment programmes;

7.3 bear in mind the basic principle of durable programme structure when making adjustments to the education;

7.4 connect organisational and educational expertise directly to the programme team.

Formulating and applying the proposed design criteria requires a collective effort from the programme manager, the lecturer team and the support staff. Programme teams work towards a curriculum with cohesive learning objectives, material and assessment within particular course units. In order to realise the desired distribution of interim examinations and compensation within larger course units, lecturers must coordinate and adjust matters between themselves. Programme teams are jointly responsible for planning interim examinations. To prevent more students than necessary from failing an interim examination, the programme manager, Examination Board and Assessment Committee will make agreements regarding systematic quality monitoring and the measures that this requires at the team level. In order to perpetuate the educational structure at the week and study-period levels, the programme manager has to make clear decisions. The programme manager will make agreements with lecturers in a timely manner with regard to their availability and deployability in the coming academic year. The programme manager will also strive to ensure the teaching is conducted by lecturer teams with no cancelled contact hours or timetable changes. Small-scale and student-activating teaching, the development of *blended learning* and the integration of student counselling requires lecturer teams to possess social, teaching and ICT skills. Coordination of logistic consequences is required between operations managers at the school and location levels.

7.1 JOINT RESPONSIBILITY AND CHAIN PLANNING

Chain planning of the design, structuring and execution of educational and assessment programmes is inextricably linked to the organisation of these activities using the resources

available. This process requires clear agreements and good relations between the parties responsible within the programme teams and the support staff at all stages. In conjunction with the programme manager, the operational management office will arrange a chain plan for the processes that will provide students with a robust educational programme in a timely manner. At the location level, coordination is conducted under the authority of the operational manager(s) and head(s) of the operational management offices.

There are short lines of communication between the programme teams and the support staff, and physical proximity is also useful. Clear agreements are made regarding how programme teams and support staff collaborate and communicate. It is important to have someone in the programme team who has experience with logistics and thorough knowledge of all aspects of the curriculum. The parties directly involved and the support staff systematically participate in meetings about the design and organisation of new programmes, or of existing programmes that require adjustment. The management team systematically consults with the support staff.

The planning of the chain is not the only factor that is of importance to the robust and academically feasible organisation of education: the execution and maintenance of the chain are also particularly important.

7.2 COORDINATION

All programmes have a curriculum featuring a number of course units with cohesive learning objectives, material and assessment. Lecturer teams coordinate with each other at the level of course units, study periods, years, phases and continual learning pathways from years 1 to 4, for example, in order to enable evenly spread and varied assessments. The support staff get involved as early as the planning stage in order to ensure that logistical conditions are taken in to account in a timely manner, preventing them from hindering the planning stage. A stable educational structure focusing on the long term greatly benefits from the creation of fixed programme teams for specific course units, study periods, semesters, academic years or programmes. These programme teams should be given enough time to establish long-term bonds with their programmes.

7.3 ADJUSTMENT OF PROGRAMMES

Adjustment of programmes is an ongoing process. The content of lessons, practical sessions and meetings with students is constantly changing. After all, we want to provide up-to-date education. To realise a robust programme within which students and employees know where

they stand and can take for granted that all agreements will be met, it is of primary importance to carefully manage all factors over which the teams have direct influence. A robust curriculum requires a predictable and transparent educational structure for the weeks, study periods, semesters and years. It is important to implement changes via the course content as much as possible, rather than by directly changing the structure. In this way, the structure of the weeks, study periods and academic years is maintained within the programme and timetable, but with new, updated content. A robust programme is defined as a new or adjusted programme whose structure remains unchanged for at least two years. After this period, careful evaluation can take place and any necessary changes can be planned in a timely manner. For all adjustments to the curriculum, and particularly the more substantial changes such as combination of first-year courses, timely design/redesign of teaching and assessment programmes is important. Curriculum development should be completed by 1 February of the academic year preceding the one in which the adjustment will come into force. This enables timely arrangement of personnel and logistical infrastructure (for more information, see the 'Quality standards for timetabling' section).

7.4 EXPERTISE

Every team has the right mix of knowledge and expertise, and up-to-date educational/teaching expertise is available at short notice. As indicated in section 7.2, it is important to have somebody in the programme team with logistics expertise and thorough knowledge of the curriculum. Small-scale and student-activating teaching, *blended learning* and the integration of student counselling require social skills, teaching skills and ICT skills in addition to all of the other knowledge and skills required by lecturer teams. This can only be achieved at the team level. Careful selection and training policy is therefore required.

7.5 TEACHING-LOGISTICS RECOMMENDATIONS

- Conduct structured consultation regarding education and support before the start of new/ existing programmes.
- Ensure clear agreements and procedures between lecturers, the programme manager and the head of the operational management office regarding changes to the curriculum and teaching.
- Establish clear agreements between the programme manager and the head of the operational management office regarding which changes will be communicated to the students, when they will be communicated and by whom.

8. MONITORING, EVALUATION AND RESEARCH ACTIVITIES

The programmes possess a number of instruments that generate numerical data on academic success and student satisfaction, namely the STM, academic success data and module evaluations. The predominantly numerical results are discussed within the departments in order to ascertain their significance. Programme teams can add an extra dimension to this process during the existing PDCA cycle by interpreting the quantitative data based on the set of design criteria. This can provide extra insights, based on which targeted interventions can be conducted. This chapter lists a number of recommendations for an investigative approach such as this and the steps that the programme manager and programme teams could implement into the PDCA cycle.

8.1 MONITORING AND EVALUATION AT THE PROGRAMME LEVEL

With the support of the quality-control staff, programme teams – and often also the programme manager – monitor their academic success rate (e.g. data on incoming, transferring and graduating students) and student satisfaction ratings as part of the quality control cycle. They attempt to interpret the effects and to plan any necessary interventions. The depth and systematic nature of the evaluations differ from programme to programme. Programme teams that work on the design criteria can gain insight into the effects of the criteria based on the academic success rate and student satisfaction results. For this purpose, departmental quality control employees add an extra activity to each PDCA phase: testing the programme attributes based on the list of design criteria. This evaluation can be conducted for a specific subject or year, or for the entire study programme. The goal of quality control is to use the existing quality control cycle to help programmes gain better insight into the causes of academic success and student satisfaction rates.

Example:
A programme team determines beforehand what it wants to achieve: of the coherent set of design criteria, which criterion do they expect will have the greatest effect on academic success and student satisfaction? Based on the list of design criteria, the parties involved will conduct discussions to explain (or hypothesise about) the specific low scores or complaints that resulted in the objective being set. For example, there was a very low academic success rate in a particular study period.

During talks with the students, it was found that for a number of interim examinations, they skipped the first testing opportunity. The students said that there was too much competition due to the high number and dense distribution of interim examinations in that study period. The programme team determines which design criteria they will use for the intervention. For example, lecturers could better coordinate their teaching and interim examinations, fewer summative interim examinations could be set, formative testing could be applied more astutely, interim examinations could be spread out more and resits could be made less appealing. The student counsellors address the scheduling of the study period in a timely manner. The information is consistently distributed. The programme manager asks the Assessment Committee to oversee the number and scheduling of formative tests and summative interim examinations. The programme team establishes what numerical effect it expects and in which study period or academic year this effect will be achieved. Once this period has elapsed, the quantitative data will be collected as a fixed part of the quality control cycle. To what extent have the objectives been achieved? Once this question is answered, the parties involved (including students) will once again seek explanations for the effects realised. The rationale behind the design criteria serves as a source of inspiration for ideas on this matter. The programme team therefore uses the list of design criteria as a sort of 'mixing desk' in which individual design criteria are coordinated with the others.

8.2 INTERPRETATIVE RESEARCH

In addition to the aforementioned monitoring and evaluation activities, programmes can also gain greater insight by further analysing themselves as a case study. This is an interpretative investigation. This kind of study investigates links between the design criteria and the results for academic success and student satisfaction and then interprets them in greater detail, also in relation to the programme context, e.g. student characteristics such as prior knowledge, gender, cohort etc. The research will not be able to demonstrate causal connections between specific design criteria and academic success. However, it will help to interpret the relationship between the implemented set of design criteria and the results for academic success and student satisfaction. A particular year, semester or course could also be used as a case study rather than the entire programme. In contrast to the aforementioned monitoring and evaluation activities, this is an independent study conducted by an unbiased researcher. The goal of the study is knowledge development, and it will provide evidence for the function of the design criteria within the AUAS context.

8.3 RESEARCH AT THE META LEVEL

Objective: to develop and share generic knowledge about design criteria that can be used by all AUAS programmes and further afield. This research builds upon the interpretative research at the programme level. It addresses the needs of the programmes, seeking to understand what works for one programme but not for another, and why. This research will be stored at the knowledge centre of the School of Education or a similar institution.

9. EXAMPLES OF ROBUST AND ACADEMICALLY FEASIBLE PROGRAMMES

This chapter features a number of detailed examples. These deal with 'pure' types of programme: in practice, programmes tend to be mixed to a certain extent. These examples are therefore not supposed to be followed to the letter, they simply serve as inspiration. The examples show how the criteria for robust and academically feasible education can be applied cohesively.

9.1 EXAMPLE 1: INTEGRATED CURRICULUM

An integrated curriculum consists of study periods scheduled in series or with a maximum of two parallel study periods. These study periods focus on one particular theme or subject. Multiple realistic practical situations (problems, assignments, tasks) are the main focus of the study period. Students are expected to immerse themselves in practical situations, master the necessary knowledge and skills, devise solutions and present their findings. Students are assessed based on their assignment results and their substantiation of the results. In most programmes, the knowledge – and sometimes skills – acquired during the realistic practical situation are also assessed in addition to the solution devised. In the tutorials, students will discuss practical situations, share information, search for solutions etc. Inspirational lectures, seminars or conferences are also possible. In the practical sessions (skills lessons, workshops etc.), students learn skills relevant to the practical situation(s). Skills can be assessed separately or as part of the overall result. Frequently, skills are 'ticked off' (with the assignment grade being conditional on demonstrating certain skills). The assignments can be collected and stored in a portfolio, which can then be assessed at the end of the study period. For the knowledge tests, a choice can be made between a) allowing no compensation and setting relative pass marks, or b) allowing compensation but setting absolute or mixed pass marks (Cohen-Schotanus)[29].

Course units:
- two per semester, carrying 15 ECTS each.

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29   For more detailed explanation of pass marks, visit the Score website
      (https://score.hva.nl/docent/toetscyclus/Paginas/Beoordelen.aspx).

Assessment distribution:
- a partial interim examination nearly every week in the form of a theory test (T), skills test (S) or an assignment (A);
- theory tests for cohorts, assignments and skills in the group (class).

Compensation system and pass mark:
- compensation (weighted) of partial interim examinations with combined pass marks (Cohen-Schotanus), or
- no compensation with relative pass marks.

Possible weighting: assignment portfolio 70%, theory tests 30%, skills serve as conditions.
- Monitoring of test quality:
- expert assessment of the quality of the portfolio assessment;
- for theory tests, a fail rate of over 30% is grounds for review.

Resits:
- resits are held after the Christmas holidays and in July (after the final study period).

WEEK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study period 1		A	S		T		A	S		T										
Study period 2												A	S		T		S	T	A

MON	TUE	WED	THU	FRI
Partial interim examination	Seminar	Practical session	Lecture	Self-study
Lecture	Self-study	Self-study	Self-study	Self-study

Notes:
- This is an indication of how a week can be scheduled. The partial interim examination is scheduled for a fixed half-day block, but not every week.
- Conducting the partial interim examination on Monday will avoid competition with other teaching activities.
- The contact time for a lecture is one or two lesson hours.

- The contact time for seminars and practical sessions is preferably two or more consecutive lesson hours: this gives sufficient opportunity for in-depth study, feedback and interaction as well as reducing transfer time.
- The structure is designed in such a way as to organise and manage the students' self-study time: this is why contact is sought with students every day.

9.2 EXAMPLE 2: LEARNING-PATHWAY CURRICULUM
The learning pathway curriculum is based on vertical integration of similar content (over time). Classification into three learning pathways is customary:
1) theory learning pathway;
2) skills learning pathway;
3) professional development learning pathway, in which the person and professional practice are the central focus (assignments, internships, academic career counselling). Student counselling is integrated into the professional development learning pathway.

The content of the theory and skills learning pathways is preferably linked to the professional development learning pathway, although this is not essential. Student-activating and small-scale teaching means that active processing of the material is the main focus (seminars, practical sessions). Problematic courses such as Mathematics or Statistics have their own didactics. For example, weekly assignments that gradually increase in difficulty each week, with feedback provided the following week (*mastery learning*) and/or extra practice material for students who are having difficulty. All interim examinations within the learning pathways are evaluated by means of a grade. The study programme can choose between a) allowing no compensation and setting relative pass marks, or b) allowing compensation but setting absolute or mixed pass marks (Cohen-Schotanus)[30]. For the professional development learning pathway, the study programme can use an assessment of the students' assessment portfolios. In the learning pathway curriculum, cooperation is required between the lecturers providing the teaching. Specialists must coordinate the content and the assessments or create them together.

Learning pathways:
Theory (T), Skills (S), Professional development (P) (professional projects, internship, academic career counselling)

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30   For a more detailed explanation of pass marks, visit the Score website
      (https://score.hva.nl/docent/toetscyclus/Paginas/Beoordelen.aspx).

Course units:

- four per semester carrying 6-10 ECTS each

Assessment distribution:

- partial interim assessments for each course unit in the form of theory tests (T) and skills tests (S) in the skills learning pathway, and portfolio assessments (P) in the professional-development learning pathway;
- theory interim examination for cohorts, skills in the group (class).

Compensation system and pass mark:

- compensation (weighted) of partial interim examinations with combined pass marks (Cohen-Schotanus), or
- no compensation, with relative pass marks.

Monitoring of test quality:

- a fail rate of over 30% is grounds for review.
- for problematic courses, the didactics are adjusted (mastery learning).

Resits:

- resits are held in July (after the final study period);
- a compensatory examination is possible.

WEEK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Theory 1				T					T											
Professional development				P					P											P
Skills					S					S						S				
Theory 2													T				T			

MON	TUE	WED	THU	FRI
Partial interim examination	Self-study	Practical session	Seminar	Lecture
Lecture	Practical session	Self-study	Self-study	Self-study

Notes:

- This is an indication of how a week can be scheduled.
- The partial interim examination is scheduled for a fixed half-day session, but not every week.
- Conducting the partial interim examination on Monday will avoid competition with other teaching activities.
- The contact time for a lecture is one or two lesson hours.
- The contact time for seminars and practical sessions is preferably two or more consecutive lesson hours: this gives sufficient opportunity for in-depth study, feedback and interaction as well as reducing transfer time.
- The structure is designed in such a way as to organise and manage the students' self-study time: this is why contact is sought with students every day.

9.3 EXAMPLE 3: PROJECT/ASSIGNMENT-BASED EDUCATION

With project-based or assignment-based education, the assignment(s) is/are the central focus. The assignments can be conducted in groups or individually. Project-based assessment has its own didactics, within which – following preliminary investigation or problem analysis – a plan of action (PoA) is created and discussed with the supervisor/assessor. Upon approval, the PoA is carried out and the results are delivered and presented. During the seminars, progress is discussed and work is conducted on the assignments. In addition to the project, courses are conducted to address material (theory and/or skills) that are insufficiently studied and assessed (if at all). Therefore, the current project-based education tends to be a mix of an assignment-based curriculum and a course curriculum. Student-activating and small-scale teaching means that active processing of the material is the main focus (in seminars and practical sessions). Problematic courses such as Mathematics or Statistics have their own didactics. For example, weekly assignments that gradually increase in difficulty with feedback provided the following week (*mastery learning*) and/or extra practice material for students who are having difficulty. Skills can be assessed separately or as part of the overall result. Frequently, skills are 'ticked off' (with the assignment grade being conditional on demonstrating certain skills). The assignments can be collected and stored in a portfolio. The portfolios can then be assessed at the end of the study period. For the knowledge tests, a choice can be made between a) allowing no compensation and setting relative pass marks, or b) allowing compensation but setting absolute or mixed pass marks (Cohen-Schotanus)[31].

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31   For a more detailed explanation of pass marks, visit the Score website (https://score.hva.nl/docent/toetscyclus/Paginas/Beoordelen.aspx).

Course units:

- six course units per semester carrying 3-7 ECTS each.

Assessment distribution:

- assignments: Plan of Action (PoA), result (R);
- course: theory test (T), assignment (A), skills (S);
- two partial interim examinations for larger course components (>5 ECTS);
- theory tests for cohorts, assignments and skills in the group (class).

Compensation system and pass mark:

- compensation (weighted) of partial interim examinations with combined pass marks (Cohen-Schotanus), or
- no compensation, with relative pass marks.

Monitoring of test quality:

- a fail rate of over 30% is grounds for review.
- for problematic courses, the didactics are adjusted (mastery learning).

Resits:

- resits are held in July (after the final study period).

WEEK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Assignment 1			PoA		R															
Assignment 2										PoA			R							
Assignment 3																	PoA			R
Course 1				T				S												
Course 2					T				T											
Course 3														S			T			

FIXED WEEKLY STRUCTURE

MON	TUE	WED	THU	FRI
Partial interim examination	Seminar	Self-study	Lecture	Seminar
Lecture	Self-study	Practical session	Self-study	Self-study

Notes:

- This is an indication of how a week can be scheduled.
- The partial interim examination is scheduled for a fixed half-day session, but not every week.
- Conducting the partial interim examination on Monday will avoid competition with other teaching activities.
- The contact time for a lecture is one or two lesson hours.
- The contact time for seminars and practical sessions is preferably two or more consecutive lesson hours: this gives sufficient opportunity for in-depth study, feedback and interaction as well as reducing transfer time.
- The structure is designed in such a way as to organise and manage the students' self-study time: this is why contact is sought with students every day.

9.4 EXAMPLE 4: COURSE CURRICULUM

A course curriculum consists of courses that each address a separate subject. For example, Mathematics, Physics and Electronic Engineering or Law, Organisational Studies and Psychology. The courses are of equal importance. Within the courses, attention is paid to the application of the theory in practical situations and to the skills required for the profession. Student-activating and small-scale teaching means that active processing of the material is the main focus (in seminars and practical sessions). Problematic courses such as Mathematics or Statistics have their own didactics. For example, weekly assignments that gradually increase in difficulty, with feedback provided the following week (mastery learning) and/or extra practice material for students who are having difficulty.

The distribution of interim examinations can be realised by means of overlap scheduling. The courses and interim examinations start in different weeks. To enable compensation of partial interim examinations and to prevent too many interim examinations from being organised and conducted, a limited number of courses will be arranged per study period (maximum of four) or semester (maximum of eight). Within course curricula, it is difficult to limit the number of interim examinations to the recommended number of 12 per semester. For programmes with lots of small courses, it is necessary to combine the material of different – preferably similar – courses into a single course. In the long term, the study programme must strive to organise a small number of large, integrated courses, such as five courses per semester carrying six ECTS each. Academic career counselling is integrated into a course in which a lecturer who sees the student on a weekly basis can assume the role of student career advisor, and wherever possible, can establish a direct connection with the content of the course (study skills).

Course units:

- maximum of four per study period or eight per semester

Assessment distribution:

- two partial interim examinations per course unit, consisting of: theory tests (T), skills tests (S) or assignments (A);
- theory interim examination for cohorts, assignments and skills in the group (class).
- problematic courses will operate a system of weekly assignments (*mastery learning*).

Compensation system and pass mark:

- compensation (weighted) of partial interim examinations with combined pass marks (Cohen-Schotanus), or
- no compensation, with relative pass marks[32].

Monitoring of test quality:

- a fail rate of over 30% is grounds for review.
- for problematic courses, the didactics are adjusted (*mastery learning*).

Resits:

- resits are held in July (following the end of study period 4).

WEEK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Course 1				T					A											
Course 2					T					T										
Course 3						S					A									
Course 4				A	A	A	A	A	A	A	A	A								
Course 5														A			T			
Course 6															A			A		
Course 7															S			T		
Course 8																T				T

32   For a more detailed explanation of pass marks, visit the Score website (https://score.hva.nl/docent/toetscyclus/Paginas/Beoordelen.aspx).

Course 4 in the example is a problematic one; the scheduled assignments are therefore more limited in scale. The problematic course will be concluded with a larger assignment.

MON	TUE	WED	THU	FRI
Partial interim examination	Seminar	Self-study	Lecture	Seminar
Lecture	Self-study	Practical session	Self-study	Self-study

Notes:

- This is an indication of how a week can be scheduled.
- The partial interim examination is scheduled for a fixed half-day session, but not every week.
- Conducting the partial interim examination on Monday will avoid competition with other teaching activities.
- The contact time for a lecture is one or two lesson hours.
- The contact time for seminars and practical sessions is preferably two or more consecutive lesson hours: this gives sufficient opportunity for in-depth study, feedback and interaction as well as reducing transfer time.
- The structure is designed in such a way as to organise and manage the students' self-study time: this is why contact is sought with students every day.

APPENDIX 1: DEFINITIONS

Educational structure:

The structure of the education within study periods or semesters, manifest in timetables specifying contact hours and assessments.

Course unit:

A course unit is a cohesive body of content to which a specific number of ECTS is assigned. Synonyms: unit of study, module, course.

Programme team:

A team of lecturers that bears collective responsibility for the content and conduct of all or part of a study programme, under the authority of a team leader or programme manager. Synonym: lecturer team.

Interim examination:

A test of knowledge, insight and skills as referred to in Sections 7.3 and 7.10 of the WHW, of which the result is expressed in an assessment concluding a course unit. An interim examination can consist of two or more separate partial interim examinations.

Annual interim examination timetable

A schedule in which the dates and times of all summative interim examinations in a particular academic year are recorded.

Summative assessment:

One interim examination or multiple partial interim examinations taken during a study period that contribute to the process of deciding whether to award the student a pass or a fail for the course unit in question.

Formative assessment:

Formative tests give students insight into their learning process and give lecturers insight into how students are doing and what they are having difficulty with. These tests are conducted during the study period and an important aspect of them is the provision of targeted and immediate feedback. This helps boost insight and enables students to adjust their study habits in a timely manner.
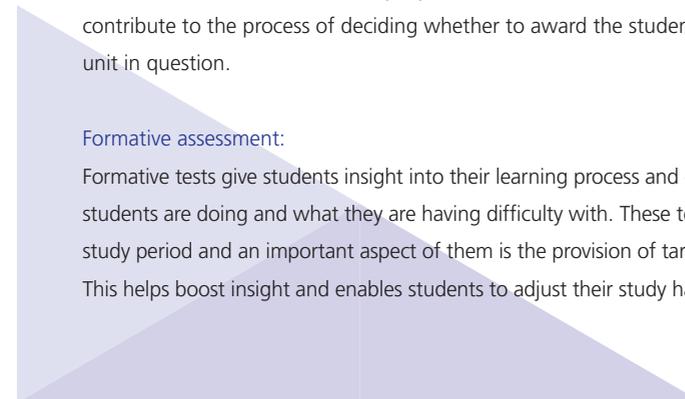
Academic success rate:

The proportion of full-time Bachelor's students that reregister for the programme after the first academic year and obtain their Bachelor's degree within the nominal duration of study plus one year. The academic success rate is expressed in the number of realised European Credit Transfer and Accumulation System credits (ECTS).
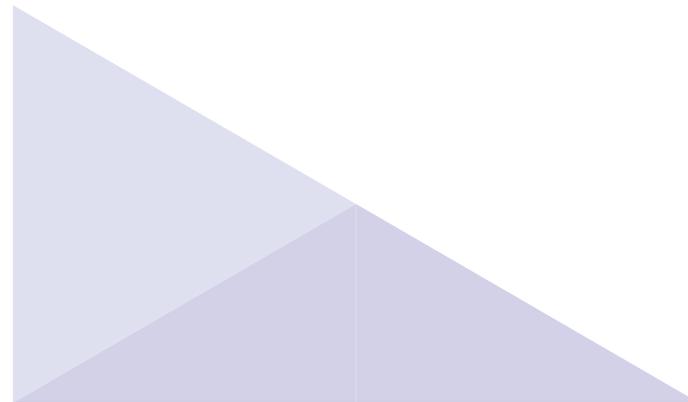
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