

Guiding Tools

3 General Academic Competence



May 2017

Guiding tool 3

General academic competencies

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1. Introduction

Introduction to the Mastermind Europe Toolkit

Mastermind Europe is an initiative to help finding a better way to decide which students are suitable for which Master's programme. With support of the ERASMUS+ programme, the Mastermind Europe Consortium developed and tested a Toolkit and Expert pool that can support academic directors of Master's programmes who wish to improve their admission system. Toolkit and Expert pool were tested, first in eight broad Focus Groups and then in seven pilots at individual Master's level. The E+ project ended in September 2017 and the (slightly revised) Consortium decided to continue the work – on a not-for-profit basis.

This Guiding Tool No 3 “General Academic Competencies” is part of a set of six Guiding Tools in the Mastermind Europe Toolkit. These Guiding Tools are:

1. Coherent Admission Framework
2. Subject-related Knowledge & Skills
3. General Academic Competencies
4. Personal Competencies & Traits
5. Language requirements, and
6. Managing Graduate Admission.

The Mastermind Europe Toolkit further contains the Mastermind Europe Manual, the Mastermind Europe Approach and three reports which strengthen the evidence base for Mastermind Europe:

- ❖ Report 1. Introduction to the Paradigm Shift: Changing paradigms in admission to Master's programmes in Europe
- ❖ Report 2. Admission to English-Taught Programs (ETPs) at Master's level in Europe: Procedures, regulations, success rates and challenges for diverse applicants
- ❖ Report 3. Restrictions; real or perceived? Legal obstacles to Master's admission in Europe

All parts of the Mastermind Europe Toolkit are freely accessible on the website www.mastermindeurope.eu, where there is also a repository of relevant literature and an explanation of the Mastermind Europe advisory service.

The set of Guiding Tools builds on the Paradigm Shift report, which shows how Master's programmes in Europe operate in an increasingly diversity environment. Because of this increasing diversity, many Master's programmes experience the need to improve their admission process, as well as the need for more transparent information to prospective students, and feedback loops between admission and curriculum implementation.

Guiding Tool 1 offers a coherent admission framework in which distinct categories of admission criteria are identified: criteria connected to subject-related, academic, personal and linguistic competencies. In addition, the Guiding Tool clarifies the distinction between criteria, norms and testing mechanisms.

Guiding Tool 2, 3, 4 and 5 zoom in on each of these categories of admission criteria. Each offers information on existing practices and research findings, and offers a 'language' to make more explicit the often implicit knowledge of core teachers about what students need to bring.

Guiding Tool 6 focuses on the crucial elements impacting the university's system and procedures in pre-admission communication, application, selection, and enrolment.

Introduction to this Guiding Tool 3: General Academic Competencies

As explained in Report 1: [“Introduction to the Paradigm Shift”](#), applicants to Master’s programmes are increasingly diverse in terms of their disciplines, their geographic/cultural background and their mix of educational and experiential learning. For the successful completion of the Master’s programme, the right kind - and the right level - of general academic competencies (or cognitive skills) are often as important as the specific subject-specific knowledge & skills at the start of the programme.

This Guiding Tool provides a step-by-step approach to support Master’s coordinators in assessing if they want to give general academic competencies a more explicit place in their admission process and if so, how to do that.

It starts with a key question for admission:

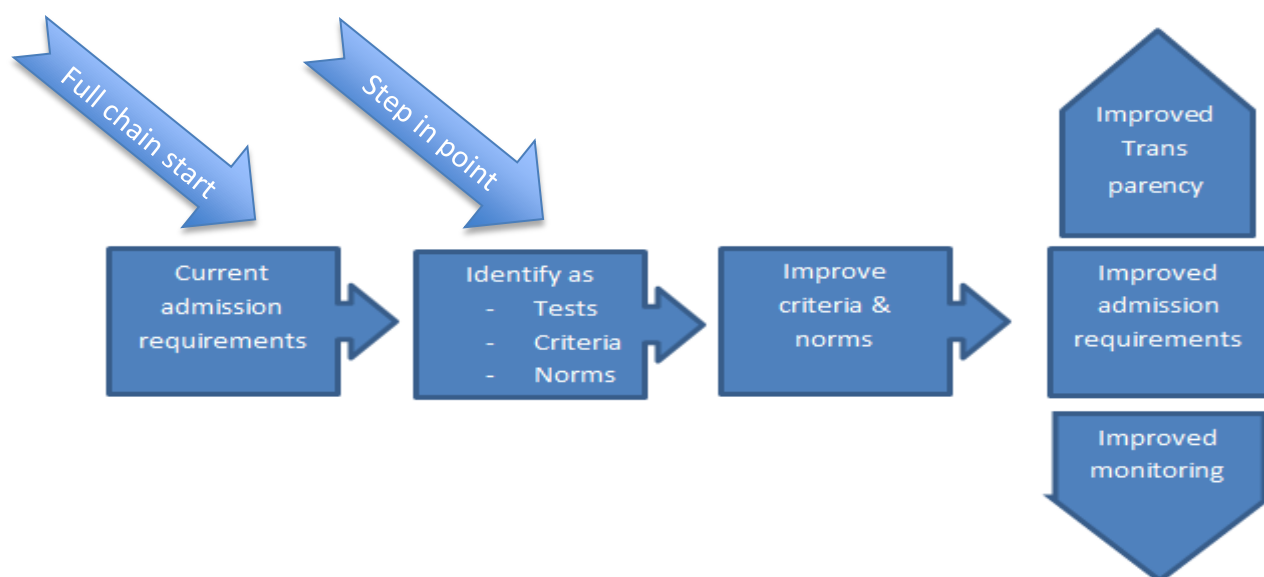
Key question:

- how can students demonstrate
- that they are good enough
- in the things they need to be good at?

The Tool is based on “full chain / step in” model and on the Coherent Admission Framework developed in Guiding Tool 1.

The “full chain” works for Master’s programmes that already have other admission requirements than just a Bachelor’s degree. It starts from the left of the visual with current admission requirements. The “step in” works for Master’s programmes that still fully rely on diploma-recognition. It starts one step to the right, because no admission requirements other than the Bachelor’s degree have as yet been defined.

Figure 1 Full chain / step-in approach



The Coherent Admission Framework allows Master’s programmes to analyse the current elements in their admission process in terms of the criteria and norms that are being used (often implicitly). Here, only the subsection for General Academic Competencies is presented – the full matrix can be found in Guiding Tool 1.

Table 1 Coherent Admission Matrix

How do you a) know (= assessment mechanisms) if b) students are good enough (= norms-levels) in c) the things they need to be good at. Or, in logical order: 1) criteria, 2) norms/levels, 3) assessment mechanisms ¹ with 4) testing scores				
	1 Criteria	2 Norms/ levels	3 Assessment mechanisms	4 Assessment scores
	What you are looking for		What you are looking at	
General Academic Competencies (Guiding tool 3)				

As many Master's programmes will have limited time and resources, the Guiding Tool offers a Step-by-step approach to quickly identify where improvements in admission are possible. We offer this quick approach in two alternative ways: tacit knowledge and VALUE rubrics.

Both options offer references to more in-depth analysis or practical examples for those readers who want to delve deeper into the topic.

¹ "Assessment mechanisms" or "Testing mechanism" are used in all Mastermind Europe documents in a very broad and non-judgemental way. It includes all and any mechanisms that master's programmes actually use in the admission process – even mechanisms that many observers and researchers would disqualify as unreliable or biased. One of the objectives of Mastermind Europe is precisely to stimulate a careful reassessment of these mechanisms.

2. Step-by-step implementation

Even for Master's programmes that need a quick-and-dirty approach, some explanation of what is meant by "General Academic Competencies" is necessary.

"General Academic Competencies" form one of the three distinct categories developed in the Mastermind Europe project to look at 'things' that students might be required to be 'good enough' in: Subject-Related Knowledge & Skills, General Academic Competencies, and Personal Competencies & Traits.

We use the distinction in 3 categories as a tool to scratch below the surface of "good enough students" – with Language Requirements as the fourth component. Throughout the Erasmus+ project (2014-2017), we found that the participants in the Focus Groups and Pilots – and many other groups – immediately understood this distinction and found it relevant. It resembles the three categories that OECD uses in its labour market skills research: professional-technical skills, cognitive skills, and social-emotional skills².

Further down in this section, more background information will be given on the General Academic Competencies with reference to both the existing standardised tests and psychological literature.

But even without that background, the step-by-step approach sketched here may help Master's programmes to find out if they want to make specific changes in their admission with regard to General Academic Competencies, and to identify improvements in their admission which they can quickly implement.

Quick approach, two alternative ways

We offer this quick approach in two alternative ways (see table below outlining both):

- One which starts with the tacit or implicit knowledge of the academics about what they consider as the required General Academic Competencies – and then relates those to the Revised Bloom Taxonomy.
- The other which starts with the VALUE rubrics developed by the AAC&U (American Association of Colleges and Universities) .

The various steps involved in the two approaches are elaborated in the table below.

For readers who want to explore the matter further, we offer references to more in-depth analysis or practical experiences in parentheses and footnotes, and further in the Annexes.

Table 2 Step by step approach

Step-by-step approach in two alternative ways	
Tacit knowledge <ol style="list-style-type: none"> 1. Sit down with senior academics of your programme and identify the General Academic Competencies (GAC) that – in your experience – have been recurrent reasons why students (and alumni) have succeeded or failed. 2. Decide which of these GAC need to be considered as part of your admission process. Choose no more than 4 or 5 you deem most important. 3. Decide on the level of competence required at the start of your programme for the chosen 	VALUE rubrics <ol style="list-style-type: none"> 1. Sit down with senior academics of your programme and decide which parts of the 10 relevant VALUE Rubrics best reflect the crucial success/fail factors for your students. 2. Chose no more than 4 or 5 you deem most important. 3. Decide which of the described levels of competence in those VALUE Rubrics best reflect the required entrance level of your programme.

² See Desjardins

competencies. 4. Relate your conclusion to the analytical framework for General Academic Competencies based on the revised Bloom taxonomy and/or the relevant VALUE rubrics ³ .	4. Relate your choices to the analytical framework for General Academic Competencies based on the revised Bloom taxonomy ² .
5. Choose one or more testing mechanisms to assess if students meet the required level in the chosen general academic competencies. 6. Decide on the required score or mark of these testing mechanisms in your admission process. 7. Decide if and how prospective students can use alternative ways to prove that they possess the required GAC. 8. Decide if and how prospective students can acquire the necessary GAC before they start studying in the programme. Also decide if and how they acquire them after they have started their studies, whether as part of the programme or as extra-curricular studies. 9. Decide on the relative weight of the GAC in the overall assessment and if a lower score may be compensated by a higher score on another area criterion, and for which elements of GAC this is possible. 10. Communicate all of this in a clear and transparent way to prospective students.	

Further explanations and details to the alternative step-by-step approaches

For both approaches (tacit knowledge and VALUE rubrics), what we basically suggest is that you critically confront current admission practice (“what you are looking at”) with an improved understanding of the underlying required levels of competency (“what you are looking for”).

This goes two ways:

- We recommend that you look for implicit assumptions about required general academic competency levels – within the current admission practice.
- And we recommend that you look for the gaps and inconsistencies in current admission – from the perspective of underlying required competency levels.

Required General Academic Competency level to enrol

What general academic competencies are required at the start of the Master’s? And which of these are so important that they need to be assessed in the admission process? The answer to these questions should logically be derived from the intended learning outcomes of the Master’s programme.

Please note that this Guiding Tool is written primarily for Master’s programmes that already exist.

For newly developed Master’s programmes, the first step will be the definition of the learning outcomes. But those are beyond the scope of this Guiding Tool.

In addition, learning outcomes should logically have been determined taking the demands of the labour market for graduates into account.

A fairly generic description of learning outcomes at Bachelor’s, Master’s and Doctoral level has been given in the Dublin descriptors. A failed attempt to produce more specific learning outcomes was made in the OECD AHELO-project and is now being made in the EU CALOHEE-project. The VALUE rubrics developed in the context of the AAC&U were mentioned already and are explained below.

³ This will help you compare your approach to that of other Master’s programmes elsewhere.

To determine the required level of General Academic Competencies, input is needed from key academics within the Master's programme. They are, after all, the experts on what is needed to succeed in their programme.

For programmes choosing the 'tacit knowledge' approach, the following set of questions can be used:

Table 3 Examining tacit knowledge

Deducting required general academic competencies from previous experiences	
Question	Room for answers
1. Can you remember a student or students <u>in past classes</u> who struggled or even failed, and where you feel this had to do with general academic competencies: critical thinking, analytical writing, verbal reasoning, quantitative reasoning, and/or understanding of concepts and ideas (diagrammatic reasoning, visual presentation)?	
2. What was particularly relevant in the case of the student you have in mind, what made you think it played a role, any particular occasions when you noticed it?	
3. Which of the categories - verbal, numerical, or logical - would you say were the most challenging for the student you have in mind?	
4. Which of the levels of Bloom's taxonomy – remembering, understanding, applying, analysing, evaluating, creating – were the most challenging for the student you have in mind?	
5. In your opinion, did the student you have in mind show one (or more) of the following: a. Tendency to reproduction b. Weakness of argumentation c. Weakness in accepting criticism, to depart from fixed positions d. Weakness of analysis e. Inability to think out-of-the box f. Inability to think in analogies or metaphors g. Inability to be interested in other viewpoints	
6. Moving from admitted students to applicants, can you remember applicants whom you either refused to admit, or did admit but with serious hesitations; again, not because of their subject knowledge or personal competencies and traits, but because of general academic competencies?	
7. Can you remember a student or students <u>in past classes</u> who struggled or even failed, and where you feel this had to do with general academic competencies: critical thinking, analytical writing, verbal reasoning, quantitative reasoning, and/or understanding of concepts and ideas (diagrammatic reasoning, visual presentation)?	

Linking entrance level to the required graduation level in a General Academic Competency

Although it is beyond the scope of the Mastermind Europe project, Master's programmes may want to relate their admission requirements to the desired end result: the academic competencies that are most important for successful completion of the Master's programme and/or entrance into

the job market.

Higher general academic competence level needed upon graduation:

- does the programme already cater for that? yes/no
If not:
- does the programme offer support for students to develop a higher level of competence?
- does the programme offer room to get support elsewhere?
- is it left up to the student to arrange for this?

The assumption here is that there is a difference between the level needed to enrol in the programme and the level required upon graduation. For Subject-Related Knowledge & Skills, this is of course self-evident and reflected in the curriculum. For General Academic Competencies (and for Personal Competencies & Traits), the higher exit level is often implicitly assumed, but not very clearly reflected in the curriculum, the study material and the work methods in the programme.

Finding words to define competency levels

As indicated above, the Mastermind Europe approach offers two alternative ways to express the General Academic Competencies; we aim to help academics to find the words to express their tacit knowledge and experiences and thus to create a bridge between their subject-related experience and the world of educational theory and practice.

We don't claim that these are the only ones or the best ones. We simply have found them the most useful in our Focus Groups and Pilots.

The first one is visualised below:

An analytical framework

Figure 2 Analytical framework GAC

General Academic Competence analytical framework			
	Textual data & information	Numerical data & information	Abstract & logic information
Create			
Evaluate			
Analyse			
Apply			
Understand			
Remember			

From: [Revised Bloom Taxonomy](#), which has another second axis:
Factual → Conceptual → Procedural → Metacognitive

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9-no

We base this framework on the analysis of existing practice in selective admission (primarily by American universities) and the way in which the



dominant standardised general tests for Master's admission are constructed: the Graduate Record Examination (GRE) test by the Educational Testing Service (ETS), and the Graduate Management Admission Test (GMAT) by the Graduate Management Admission Council (GMAC). Both ETS and GMAC are non-profit organisations, although they operate in a fairly business-like manner. From the IE-admission test (by IE-university in Spain), we borrowed the additional category of 'abstract and logical information', as both GRE and GMAT focus on the textual and numerical perspectives only.

To these three kinds of General Academic Competency, we have added a version of the Revised Bloom Taxonomy of learning, which provides a hierarchy of learning and of acquired levels of competency. More in-depth analysis of this taxonomy shows that in fact it consists of an ever more refined taxonomy of taxonomies, which does not add to its ease of use.

Mastermind Europe does not pretend full scholarly competence in matters of didactics or the relevant fields of psychology. But we have checked this analytical framework for General Academic Competencies with specialists in these fields, who have confirmed that it is coherent with state current state of research and theoretical thinking.

The AAC&U VALUE Rubrics

In the Mastermind Europe project, we have found that the VALUE Rubrics offer a second valuable way to give words to the tacit knowledge and experiences of academics and to create a bridge between their subject-related experience and educational theory and practice. The VALUE Rubrics were developed under the Aegis of the Association of American Colleges and Universities (AAC&U).

In the original VALUE initiative in 2007-2009, teams of faculty and other educational professionals from over 100 higher education institutions in the US developed and tested the 16 VALUE rubrics.

Ten VALUE Rubrics can be connected to the General Academic Competencies of the Mastermind Europe approach and are discussed in this Guiding Tool. The remaining six Rubrics are more related to the Personal Competencies & Traits discussed in Guiding Tool 4⁴.

Below, spread over two tables, is an overview of these 10 VALUE Rubrics, each of them consisting of five to six main dimensions.

Table 4 VALUE Rubrics' overview: cognitive

Creative thinking	Critical thinking	Information literacy	Inquiry & analysis	Integrative learning
Acquiring Competencies	Explanation of issues	Determine the Extent of Information Needed	Topic selection	Connections to Experience
Taking Risks	Evidence	Access the Needed Information	Existing Knowledge, Research, and/or Views	Connections to Discipline
Solving Problems	Influence of context and assumptions	Evaluate Information and its Sources Critically	Design Process	Transfer
Embracing Contradictions		Use Information Effectively to Accomplish a Specific Purpose	Analysis	Integrated Communication
Innovative Thinking	Student's position	Access and Use Information Ethically and Legally	Conclusions	Reflection and Self-Assessment

⁴ **NB** The attribution of these Rubrics to 'General Academic' or 'Personal' may in some cases be open for discussion and we claim, no final verdict. If these Rubrics are found useful, it doesn't really matter under which label they are put.

Connecting, Synthesizing, Transforming	Conclusions and related outcomes	Limitations and Implications
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We must keep repeating: we don't argue in any way that Master's programmes should consider taking all these competencies on board; we provide them as a language in which to express what the core academics recognise as the (most) important competencies the students should bring to the programme.

Table 5 VALUE Rubrics' overview: cognitive, continued

Lifelong learning	Problem solving	Quantitative literacy	Reading	Written communication
Curiosity	Define Problem	Interpretation	Comprehension	Context of and Purpose for Writing
Initiative	Identify Strategies	Representation	Genres	Content Development
Independence	Propose Solutions/Hypotheses	Calculation	Relationship to Text	Genre and Disciplinary Conventions
Transfer	Evaluate Potential Solutions	Application / Analysis	Analysis	Sources and Evidence
Reflection	Implement Solution	Assumptions	Interpretation	Control of Syntax and Mechanics
	Evaluate Outcomes	Communication	Reader's Voice	

The crucial value of the VALUE Rubrics – as experienced in the Mastermind Europe project – lies in the performance descriptors of progressively more sophisticated levels of attainment.

Two examples:

One from “Critical thinking”:

Table 6 VALUE Rubrics' performance descriptors

	Capstone 4	Milestones 3 2		Benchmark 1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.

And one from “Quantitative Literacy”:

	Capstone 4	Milestones 3 2		Benchmark 1
Application / Analysis <i>Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis</i>	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.

Particularly in the Mastermind pilots, the academics found these ‘progressing performance descriptors’ very useful to articulate what is and isn’t good enough in general academic competencies at the start of their Master’s programme. It allows them to say: “They have to be already beyond Benchmark 1 / Milestone 2 / etc, when they start in my Master’s programme”.

Assessing current admission procedure – and finding ‘low hanging fruit’ for improvement

Once you know specifically what general academic competencies students need to have at the start of their Master’s programme, you can compare this with your current admission process. You may find the following set of questions useful:

Table 7 Finding Low Hanging Fruit

Current admission process	
Question	Room for answers
Are there elements in your admission process that relate to General Academic Competencies? Which elements?	
If so, what kind of proof do you require?	
Do these elements fit best in the Analytical Framework of Verbal/Numerical/Logical skills or rather in some of the VALUE Rubrics? Which specifically?	
Are you satisfied with the articulation of the competencies (and level of competency)?	
Can the Analytical Framework or the VALUE Rubrics help to improve your articulation of the required levels of competency	
What tests or mechanisms do you use to assess the competency of applicants?	
Did you ever encounter any difficulties in assessing an applicant's writing/mathematical/analytical skills?	
If so, could you briefly describe these difficulties?	
Are you satisfied with how you communicate the required competencies to potential students?	

Assessing General Academic Competencies: How you assess, how you value the assessment

In the paragraphs above, we have suggested that you may wish to articulate more precisely what General Academic Competencies you want to assess. Below we discuss which tools you could choose for that assessment and how rigorous or flexible you can be in using these tools.

If you find your current admission process inadequate in its assessment of general academic competencies, you can develop your own tests, or decide to use existing standardized tests. The most commonly used are the Graduate Record Examinations (GRE), developed and offered by Educational Testing Service (ETS), and the Graduate Management Admission Test (GMAT), developed and offered by the Graduate Management Admission Council (GMAC). Other alternatives are available but they are not presented in this Guiding Tool.

An overview of existing tests is given below, and more detailed information on these tests is provided in Appendix D to this guiding tool.

Table 8 Overview of existing standardised test

	Textual data & information	Numerical data & information	Abstract & logical information
GRE	✓	✓	-
GMAT	✓	✓	-
IE	✓	✓	✓
ESonline	✓	✓	“problem solving”
MAT	✓	-	-

Regardless of which test you choose, there are some additional issues to be considered:

- Standardised tests do not tell you which testing score is adequate for your Master’s programme. You will need to determine the suitable testing score range for your programme.
- Standardised tests correlate with the verbal and quantitative parts the Revised Bloom Taxonomy, but not in a very clear way – and their correlation with the VALUE Rubrics is even less clear. Standardised tests give overall scores, but these are constructed from the scores on the constituent parts. The testing organisations themselves underline that specificities of your programme should determine the relative importance of the parts of the test.
- You will need to identify the most relevant parts of the test for your programme and establish a relative weight for these parts.
- Standardised tests sternly warn against using them as a simple mechanism for a Yes/No answer; they strongly urge to use the test as just one of a set of factors in your decision.

With all these warnings about the standardised test, a number of other questions remain :

- Do all applicants have to submit to the same test, even if there is other valid proof that they have the required competencies? Standardised tests have been shown to work less well with mature students who have extensive work experience.
- If applicants fail to meet the required score, do they get an opportunity to improve their competencies and meet the required levels in time? Do they get that option in time for the start of the programme or in time for graduation?
- Will you only consider the highest scores, or is there a minimum score required (or both)? Does a low score automatically lead to rejection, or could it also lead to a conditional admission? And would this condition then be the student’s responsibility (the student having to ensure to be good enough before the admission turns into an unconditional one), or

would it be a signal to the programme (with the programme taking responsibility to provide extra care to the student in this field)?

- Also: could it be that a low score on general academic competency might be compensated by a high score on subject-related knowledge and skills and/or personal competencies and traits? Or that a low score on the verbal part of the test might be compensated by a high score on the numerical part? Obviously, there is no “one size fits all” in answering these questions; the answers will vary depending on the demands (and possibilities) of the specific Master’s.

Institutional research

No matter how carefully designed an adapted admission process is, the only way to determine whether the right choices have been made in selecting admission criteria and norms will be to monitor how accepted students perform in the course of the programme – as well as after graduation!

The full chain / step-in analysis of the admission process in search for potential improvement mentioned in the introductory paragraph is, of course, an exercise that should be repeated.

Example

Below is one example of the use of the Mastermind Europe approach, showing how the tool works. If a Master’s programme has identified the use of GPA (Grade Point Average) as something be improved in its admission, the table below shows which steps could be taken to complete the ‘full/half cycle’.

Table 9 Sample analysis of GPA for general academic competency

An example for one general academic competency	
The GPA in practice	What can you say about it?
We look for a GPA > 3.5	This is a mixture of a testing mechanism (GPA = grade point average) and a norm > 3.5
What criterion is involved?	General Academic Competence, but no differentiation within the concept of general academic competencies.
What norm is applied?	A norm within the GPA: >3.5, but no differentiation of general academic competencies
How satisfactory is this practice?	Possible answers: - “We are satisfied, no change” or - “We want to change in some ways”; see next rows.
Possible conclusions in terms of articulation of criteria/norms:	“We need to be more precise about what we want in terms of the GAC framework”
Possible conclusions in terms of choice of testing mechanisms:	“We need to have better/more triangulation: more and different mechanisms to test GAC”
Possible conclusions in terms of transparency:	“We need to explain better to students what we are looking for”
Possible conclusions in terms of monitoring:	“We need to include GPA in our student success monitoring: see if the GPA predicts success better than other indicators for GAC”

Information for prospective students

After discussing criteria, norms and testing mechanisms, and after adapting your admission process accordingly, it is important to be transparent about what you expect from the applicants. A clear description - and explanation - of your requirements may work as an additional motivation for qualified students to apply, and may discourage unqualified students.

Concluding remarks

In this Guiding Tool 3 on General Academic Competencies, we have offered the reader a step by step way to either a 'quick-and-dirty' or a more elaborate approach for one key aspect of an improved admission process to enhance Master's admission for a diverse international classroom.

The other Guiding Tools give similar guidance to the other key aspects (GT2 Subject, GT 4 Personal, GT 5 Language) and to the coherence and manageability of the admission process as a whole (GT 1 Coherence, GT 6 Manageability). A quick summary to the process is found in the Mastermind Europe Manual and the Mastermind Europe Approach description.

In practice, Master's programmes wanting to use the Mastermind Europe toolkit may find it useful to invite one of the Mastermind Europe experts to assist in the process.

Whichever way you proceed, the Mastermind Europe team hopes that our toolkit and its components help Master's programmes in Europe and beyond to reflect on their admission and how to improve it to achieve a diverse and international classroom.

Annex A

Questions on General Academic Competencies in the application process for Master's Coordinators

1. Textual

For applicant students:

- a) Does your admissions process require proof of an applicant's writing skills?
YES / NO
- b) If so, what kind of proof do you require?

- c) Have you formulated criteria against which to determine whether the writing skills are sufficient for enrolment in your Master's programme?
YES / NO
- d) Could you briefly describe these criteria?

- e) Are these criteria communicated to the applicants?
YES / NO
- f) Did you ever encounter any difficulties in assessing an applicant's writing skills?
YES / NO
- g) If so, could you briefly describe these difficulties?

For enrolled students:

- h) Do you experience difficulties with the writing skills of students currently enrolled in your Master's programme?
YES / NO
- i) If so, do you offer support to these students?
YES / NO

2. Numerical

For applicant students:

- a) Does your admissions process require proof of an applicant's mathematical skills?
YES / NO
- b) If so, what kind of proof do you require?

- c) Have you formulated criteria against which to determine whether the mathematical skills are sufficient for enrolment in your Master's programme?
YES / NO
- d) Could you briefly describe these criteria?

- e) Are these criteria communicated to the applicants?
YES / NO
- f) Did you ever encounter any difficulties in assessing an applicant's mathematical skills?
YES / NO
- g) If so, could you briefly describe these difficulties?

For enrolled students:

- h) Do you experience difficulties with the mathematical skills of students currently enrolled in your Master's programme?
YES / NO
- i) If so, do you offer support to these students?
YES / NO

3. Abstract / logical

For applicant students:

- a) Does your admissions process require proof of an applicant's analytical skills?
YES / NO
- b) If so, what kind of proof do you require?

- c) Have you formulated criteria against which to determine whether the analytical skills are sufficient for enrolment in your Master's programme?
YES / NO
- d) Could you briefly describe these criteria?

- e) Are these criteria communicated to the applicants?
YES / NO
- f) Did you ever encounter any difficulties in assessing an applicant's analytical skills?
YES / NO
- g) If so, could you briefly describe these difficulties?

For enrolled students:

- h) Do you experience difficulties with the analytical skills of students currently enrolled in your Master's programme?
YES / NO
- i) If so, do you offer support to these students?
YES / NO

Annex B

Examples of programmes using GRE and/or GMAT in their application process

Introduction

This Annex provides information on a random selection of European Master programmes which already use GRE and/or GMAT in their application processes. The information was taken from their website, from the pages targeting potential students. Further information is available through the respective university's websites.

Technische Universität Wien

To apply for Master Building Science and Technology, you need...

- a degree from one of the following accredited national or international degree-granting programs (Bachelor, Master or Diploma): architecture, civil engineering, mechanical engineering, media computer science, software & information engineering, technical computer science or any other subject related field (if the field is subject related or not is decided by the dean of studies).
- Special entrance qualification for university (just if you are not a member of an EU/EWR country).
- CV including relevant work experience (max. 3 A4 pages)
- Statement of intent (max. 2 A4 pages)
- Proficiency in English language (IELTS, TOEFL iBT, CAE, FCE)
- Proof of academic aptitude through recognized exams (preferred GRE)

Katholieke Universiteit Leuven

Frequently Asked Questions

Master of Science in Electrical Engineering
Language tests/ Certifications

Institutional code and Department (for TOEFL test)?

University code: 0749 and, if required, department code 99.

TOEFL still needed when doing bachelor at GroupT?

Yes, the TOEFL is still required

Is a copy of the TOEFL certificate enough?

No, the original TOEFL or IELTS certificates have to be sent directly by ETS or The British Council as indicated here.

Is a GRE required?

The admissions committee looks at the *complete* package: if you have a GRE score and your competitors have not, you have an extra element in your application package. If you don't have a GRE score, we expect that you demonstrate your excellence by other means. Examples are: graduation from an excellently ranked university in your home country, being a top student in your department, having published a paper at an internationally recognized conference, having excellent letter of reference, etc. GRE and TOEFL are each one component of this package.

Minimum requirements

- IELTS: 6.5
- TOEFL: iBT 79 or CBT 213 or PBT 550
- TOEIC: Listening 490 + Reading 455 + Speaking 200 + Writing 200
- SAT: Reasoning Test Critical Reading 500 + Writing 500
- ACT: English 20 + Reading 20

- Certificate in Advanced English: (CAE) grade A, B, or C
- Certificate of Proficiency in English: (CPE) grade A, B, or C

Sciences Po

International graduate admissions: eligibility criteria

The international graduate admissions procedure is open to applicants having completed their university education in an institution outside of France and having obtained any of the following:

- an undergraduate level degree (Bachelor of Arts/Bachelor of Sciences/licenciatura/licence) at the time of entry to Sciences Po.
- a Masters level degree (magistr or magistracy, for example) for countries in which universities do not award undergraduate qualifications.
- for applicants having attended German or Austrian universities, a Vordiplom/Zwischenprüfung/Diplomprüfung (the equivalent of 120 credits) and a complete year of students at postgraduate level/second cycle (Hauptstudium - the equivalent of 60 credits).
- for applicants having attended Russian universities, a Bakalavr or Specialist qualification.

Remarks

Eligibility through the international procedure is contingent on the applicant having completed his/her undergraduate studies in a university not in France. It is not based on the applicant's nationality.

Eligible applicants must have been selected and enrolled for a minimum of two years and must have obtained a degree from the foreign university.

You can only submit one online application per academic year. You cannot apply to a graduate programme through two different admission procedures the same year.

Applicants completing an undergraduate programme under which they will not graduate before 4 or 5 years are not eligible to apply before they have or are about to obtain their degree. No exemptions will be made.

Remarks for the Master in Economics and the Master in Public Policy/Orientation Economics and Public Policy

For these programmes, applicants must have a firm grounding in quantitative methods.

They must demonstrate that they have acquired during their undergraduate studies a solid knowledge of mathematics or formal logic (Formal logic, Calculus techniques, matrix algebra, constrained optimisation, and basic statistics. Examples of such skills can be found in the textbook : Essential mathematics for economic analysis, by K. Sydsaeter and P. Hammond, Financial Times / Prentice Hall, 2008 [3rd edition]).

The GRE Revised General Test scores are highly appreciated for these programmes.

Remarks for the Master in International Economic Policy

Please note that although there is no mathematics admissions prerequisite, candidates for the Master in International Economic Policy are expected to have completed successfully at least introductory courses in microeconomics and macroeconomics at the undergraduate level.

Humboldt Universität - School of Business and Economics

List of documents required for application

- Degree Certificate (or Vordiplom)
- Transcripts
- GRE revised General Test
- Two Letters of Recommendation
- Curriculum Vitae
- Motivation Letter
- English Language Test
- APS

NOTE: All documents can be submitted in German or English. Translations are not required for English documents.

Degree Certificate (or Vordiplom)

The Degree Certificate should be submitted in either English or German, issued by the applicant's previous university and, where applicable, with a certified translation of the original.

Scanned copies of the Degree Certificate should be uploaded online. Should an applicant receive acceptance, he or she should bring the original document to the matriculation office in September for verification.

MEMS encourages students from all study tracts to apply for the program. A sufficient academic background consists of a strong knowledge of advanced mathematics. The main difference between our program and an MBA is our emphasis on quantitative methods. It prepares you for an academic or professional career in economics or international management.

Transcripts

Transcripts should also be submitted in English or German, issued by the applicant's previous university or as a certified translation of the original.

Scanned copies of transcripts should be uploaded online, and applicants are not required to send the original documents by post. Should an applicant receive acceptance, he or she should bring the original documents to the matriculation office in September.

The GRE revised General Test (GRE)

Institution Code: 8167

Department Code: 1801 (if not working, type in "Economics" instead)

All applicants are required to take the GRE test - GMAT is not a substitute. The score must not be older than five years before the application deadline. Scanned copies of the GRE report are acceptable upon the application deadline. Should an Applicant receive an official acceptance, he/she will still need to submit the original score reports.

As a benchmark to compare your own results, you may refer to the past data of accepted applicants of the MEMS program under "Statistics".

Two Letters of Recommendation

Once an applicant is registered in the online system and the respective sections are completed, he/she will receive a special form, via email, that should be passed on to the recommenders. Recommendation letters are expected to be written by Professors from your previous university and sent directly by the professor, by post, to the MEMS office in a signed, sealed envelope. Please note, applicants may submit letters of recommendation from individuals outside of academia, but letters from previous professors are preferred.

It is your responsibility to ensure that your letters of recommendation are submitted on time.

Curriculum Vitae

The CV should provide an overview of an applicant's experience and other qualifications.

Motivation Letter

A Letter of Motivation should indicate the applicant's research, professional intentions and specific reasons for their interest in the MEMS Program. It should be written in English or in German.

English Language Test

Institution Code: 8167

Department Code: 84

All applicants must provide proof that their English is at a C1 level (according to the Common European Framework of Reference for Languages) or higher. The score must not be older than two years before the application deadline. Scanned copies of the certificates can be uploaded on the system. Should an applicant receive an official acceptance, he/she will still need to submit the original score reports.

We accept the following tests:

Test	Minimum Score/Grade
IELTS (Academic)	6,5
TOEFL	
Internet-based Test	100
Paper-based Test	600
HU-Leistungsnachweis Stufe UNIcert® II	1,3
HU-Leistungsnachweis Stufe UNIcert® III	3,0
Certificate of Proficiency in English CPE	A-C
Certificate in Advanced English CAE	A-C
Business Higher BEC	A-C
International Certificate in Financial English ICFE	C1 Pass / ~with merits
Business Language Testing Service BULATS	75+
International Legal English Certificate ILEC	C1 Pass / ~with merits
Cambridge First Certificate in English FCE	A
London Chamber of Commerce and Industry LCCI Business English	Level 3 with distinction / Level 4 Pass
Pearson Test of English PTE Academic	62
DAAD-Sprachzeugnis	Ø mindestens B, kein Ergebnis < C

Native speakers are exempt from taking an English language test, but should hand in a copy of passport as a confirmation (only citizens from English speaking countries like USA, Canada, Australia, New Zealand, UK, Bahamas and others). Students who have completed a previous university program entirely in English in a country where English is an official language, should submit an official confirmation from their university.

If applicable, another option is to hand in a copy of the Abiturzeugnis with certain detailed requirements. Details can be found in the "Fächerübergreifende Satzung zur Regelung von Zulassung, Studium und Prüfung der Humboldt-Universität zu Berlin".

APS (Akademische Prüfstelle)

All students from P.R.China who want to apply for MEMS Program need to obtain an APS Certificate: see www.aps.org.cn/web

Tilburg University – Tilburg School of Economics and Management/CentER

Track	GRE or GMAT required?
Accounting	Either GRE or GMAT
Econometrics	GRE only
Finance	Either GRE or GMAT
Information Management	Either GRE or GMAT
Macroeconomics	GRE only
Marketing	Either GRE or GMAT
Microeconomics	GRE only

Operations Research

Either GRE or GMAT

Organization & Strategy

Either GRE or GMAT

What entrance exams are required for admission to CentER?

All students applying for admission to CentER graduate programs must take either the GRE or the GMAT. Applications that do not include GRE/GMAT scores will not be considered. (See table above for requirements).

Why are the GRE and GMAT compulsory?

The GRE/GMAT scores are considered to be an indicator of likely success in graduate level programs as they demonstrate an applicant's ability to think clearly and analytically. In addition, because we receive applications for admission from all over the world and from a wide variety of educational systems and standards, the GRE/GMAT provides a uniform method by which we can gauge academic preparedness and general knowledge considered fundamental to the rigors of a graduate school education.

What is the minimum GRE/GMAT score required for admission to CentER?

In general, we require a score of 90% or higher on the quantitative section of the GRE or 90% or higher on the total score of the GMAT. It is very rare that an applicant with a score below 85% is accepted, unless there are very strong counter-balancing factors, such as an outstanding undergraduate academic performance, or compelling evidence of extenuating circumstances.

Is it possible to get an exemption from the GRE/GMAT requirement?

ALL applicants for admission to CentER must take the GRE or GMAT. In the interest of fairness and to ensure that all applications are considered equally, these test scores are compulsory.

What are the minimum English language test scores required for admission to CentER?

- Academic IELTS: a minimum of 7.0 overall and 6.0 on parts;
- TOEFL: paper-based: a minimum of 600, internet-based: a minimum of 100;
- Cambridge Certificate of Advanced English (CAE): a minimum level of B, or a
- Cambridge Certificate of Proficiency in English (CPE)

Can I get an exemption for the English language test?

You can get an exemption for the English language test if you meet at least one of the following requirements:

1. If you are a native English speaker, i.e. if you are a citizen of one of the following countries: Australia, Canada (with exception of Quebec), Ireland, New Zealand, United Kingdom and United States of America.
2. If you completed all your secondary or your university education in English. This only applies to scholars from the following countries: Australia, Canada (with exception of Quebec), Ireland, New Zealand, United Kingdom and United States of America.
3. If you completed a 3-years Academic Bachelor's program (of at least 180 ECTS credits) fully in English in an accredited Research University in one of the following countries: Australia, Canada (with exception of Quebec), Ireland, New Zealand, United Kingdom and United States of America.
4. If you are citizen of The Netherlands, Belgium, Norway, Sweden, Denmark, Finland, Iceland, Germany, Austria, Switzerland, India and Singapore and if you have completed a 3-years Academic Bachelor's program (of at least 180 ECTS credits) fully in English in an accredited Research University.

Are copies rather than originals of GRE/GMAT/IELTS/TOEFL results accepted?

If you are getting close to the application deadline, you may upload the unofficial test score. However if you are admitted to CentER, you have to send us the official test score in order to be accepted to our programs.

Can I apply for enrollment at CentER before taking the GRE/GMAT/IELTS/TOEFL?

No, however you may apply with your provisional test scores. You do not have to wait until you receive the official scores before applying.

Where can I get information on preparing for and taking the GRE?

Information on preparing for and registering to take the GRE can be found at:

<http://www.ets.org/gre>.

Where can I get information on preparing for and taking the GMAT?

Information on preparing for and registering to take the GMAT can be found at:

<http://www.mba.com/mba/takethegmat>.

Where can I get information on taking the IELTS?

Information on IELTS is available at www.ielts.org. Please note that we require you to take the academic part of this test.

Where can I get information on taking the TOEFL?

Information on TOEFL is available at www.toefl.org. The TOEFL institution code for Tilburg University is 9860.

What is the minimum IELTS score required for admission to CentER?

We require a minimum score of 7.0 in the Academic IELTS test and no section below 6.0.

What is the minimum TOEFL score required for admission to CentER?

To be admitted to our program, candidates must have scored at least 600 in the TOEFL paper based test, or 100 in the TOEFL internet based test.

What are the institution codes for GRE/GMAT?

The GMAT institution code for Tilburg University is VMV-LT-92. The GRE institution code for Tilburg University is 0730.

My GRE/GMAT/IELTS/TOEFL test results are older than five years. Will they be accepted?

No. Any test results older than five years can unfortunately not be accepted. Please make arrangements to re-take these tests.

Stockholm University

Who can apply for graduate studies?

Qualified applicants meet one of the following two requirements:

1. First cycle degree (corresponding to a Swedish kandidatexamen) from a Nordic university plus one year from the second cycle (master level). At least 90 ECTS credits (three semesters of full-time study) in economics are required. A qualified applicant has written a thesis in economics amounting to at least 15 ECTS credits. Applicants are encouraged to take the Graduate Record Examination (GRE) General Test.
2. First cycle degree (bachelor's degree) from a non-Nordic university plus one year from the second cycle (master level). At least 90 ECTS credits (three semesters of full-time study) in economics are required. A qualified applicant has written a thesis in economics amounting to at least 15 ECTS credits. Applicants are strongly encouraged to take the Graduate Record Examination (GRE) General Test. Applicants who do not have Swedish or English as their native language must show proficiency in English to be considered for admission. We recommend such applicants to take the Test of English as a Foreign Language (TOEFL).

Annex C

Suggestions for further reading

Reference / title	URL
Addey, C., Sellar, S., Steiner-Khamisi, G., Lingard, B., & Verger, A. (2017). The rise of international large-scale assessments and rationales for participation. <i>Compare: A Journal of Comparative and International Education</i> , 47(3), 434-452.	http://bit.ly/2CJf7t5
Allen, Jim, et al. "The flexible professional in the knowledge society: General results of the REFLEX project." (2007).	http://bit.ly/2IYnvdL
Benander, R., Robles, R., Brawn, D., & Refaei, B. (2016). Assessment without Standardization: Can General Education Competencies be Assessed from ePortfolios across the University?. <i>The Journal for Research and Practice in College Teaching</i> , 1(1).	http://bit.ly/2qv81DF
Desjardins, R., Thorn, W., Schleicher, A., Quintini, G., Pellizzari, M., Kis, V., & Chung, J. E. (2013). <i>OECD Skills Outlook 2013: First Results from the Survey of Adult Skills</i> .	http://bit.ly/2tmXz2E
Faktaa Hidden Competences; CIMO	http://bit.ly/1FGgAcg
Finley, A. (2016). Problem Solving and Transparent Teaching Practices: Insights from Direct Assessment. <i>Peer Review</i> , 18(1/2), 39.	http://bit.ly/2CXrFuJ
Frank, B. M., Kaupp, J. A., & Simper, M. N. (2015). Multi-method longitudinal assessment of transferrable intellectual learning outcomes. <i>age</i> , 26, 1.	http://bit.ly/2CG7raV
Gray, J. S., Brown, M. A., & Connolly, J. P. (2017). Examining Construct Validity of the Quantitative Literacy VALUE Rubric in College-level STEM Assignments. <i>Research & Practice in Assessment</i> , 12.	http://bit.ly/2F1M4zt
Kautz, T., Heckman, J. J., Diris, R., Ter Weel, B., & Borghans, L. (2014). <i>Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success</i> (No. w20749). National Bureau of Economic Research.	http://bit.ly/2Cyo8C1
Sparks, Jesse R., et al. "Assessing Written Communication in Higher Education: Review and Recommendations for Next-Generation Assessment."ETS Research Report Series 2014.2 (2014): 1-52.	http://bit.ly/2CHyNxj
Turbow, D. J., & Evener, J. (2016). Norming a VALUE rubric to assess graduate information literacy skills. <i>Journal of the Medical Library Association: JMLA</i> , 104(3), 209.	http://bit.ly/2qr5WIR
Wendler, C., & Bridgeman, B. (2014). The research foundation for the GRE® revised General Test: A compendium of studies. <i>Princeton, NJ: Educational Testing Service</i> . Retrieved from http://www.ets.org/s/research/pdf/gre_compendium.pdf .	http://bit.ly/2m2eiBX
Zlatkin-Troitschanskaia, O., Pant, H. A., Lautenbach, C., Molerov, D., Toepper, M., & Brückner, S. (2017). An Overview of Assessment Practices. In <i>Modeling and Measuring Competencies in Higher Education</i> (pp. 7-19). Springer Fachmedien Wiesbaden.	http://bit.ly/2CHc5FF

Annex D

GRE & GMAT step by step

Introduction

Please note that the information in the following paragraphs is based on sources from the organisations involved in offering these tests. Currently this chapter does not include any advice on how to incorporate using these tests in your application process.

GRE step by step

Become a GRE® Score User

GRE® test scores can be used by admissions or fellowship panels to supplement undergraduate records and other qualifications for graduate-level study. The scores provide common measures for comparing the qualifications of applicants and aid in the evaluation of grades and recommendations.

Institutions that award graduate degrees and non-degree-granting organizations that award graduate fellowships are qualified to be score users. Institutions and organizations that do not meet either one of these requirements may not be eligible to be score users, but the GRE Board retains the right to make exceptions to this policy in special circumstances. In addition, undergraduate institutions can apply to receive GRE scores of their undergraduate students.

To become a GRE score user, please complete and submit the appropriate online form:

- Application Form for Graduate Schools (see form below)
- Application Form for Graduate Business Schools
- Application Form for Graduate Fellowship or Scholarship Granting Organizations
- Application Form for Undergraduate Institutions

For more information about how your institution can begin receiving GRE scores, please contact GRE Code Control at 1-609-771-7091 or codecontrol@ets.org.



GRE® Score Recipient Application Form for Graduate Schools

Institutions that award graduate degrees and non-degree-granting organizations that award graduate fellowships are eligible for consideration by ETS as recipients of GRE® (Graduate Record Examinations®) scores. Institutions and non-degree-granting organizations that do not meet either one of these requirements are, in general, not eligible to be score recipients. ETS reserves the right, at its sole discretion, to grant or revoke a DI (as such term is defined below) based on eligibility requirements or for any other reason, and to make exceptions to its policy, under special circumstances.

If your institution meets the requirements stated above, ETS will send you a letter or email with your Designated Institution (DI) code within approximately three (3) weeks after receiving your application.

When GRE candidates select your institution as a score recipient during registration, on the day of their test, or should be within a period of five (5) years after their test date, their scores will be sent directly to the "Authorized Score Recipient and Reporting Address" you designate below on this form.

Appropriate Use of GRE Scores

GRE score recipients may use GRE score data for purposes of evaluating applicants to (i) graduate programs and (ii) graduate fellowship/scholarship programs. GRE score recipients may not, without the express, prior, written consent of ETS, use GRE score data for any other purpose, or

copy, release, provide access to or otherwise disclose GRE score data to anyone except individuals within their particular organization having a need to know.

By applying to ETS for a DI code, you acknowledge that ETS is, and at all times shall remain, the owner of all GRE score data and that your Institution does not have, nor will it acquire, any right in and to the GRE score data by virtue of receiving a DI code. ETS reserves the right to monitor access and use of the GRE score data by all GRE score recipients.

ETS publishes a list of official GRE score recipients in the GRE testing package for the computer-based GRE revised General Test, which is updated on a regular basis, and in the GRE® Institutions & Fellowship Sponsors Approved to Receive GRE Scores list at www.ets.org/gre/bulletinandforms, which is updated once per month. No personally identifiable information is published.

GMAT step by step

Start Accepting GMAT® Exam Scores

Start accepting the best candidates for your program.

You know that accepting the GMAT exam will help you better assess the quality of candidates who are interested in your program. Now it's time to take the next step and become a score recipient.

The following qualifying entities can apply to receive GMAT scores:

Institutions: Degree-granting institutions that offer graduate-level programs. You must agree to use the GMAT exam as an admission criterion and you must agree to the Terms of Use. Begin the process by downloading the institution application today.

Institution Application for GMAT® Scores

Thank you for applying to receive Graduate Management Admission Test (GMAT) score reports from prospective students. We appreciate your interest in using the GMAT exam as a criterion for admission to your graduate management program.

Eligibility for GMAT Scores

To be eligible to receive GMAT scores, you must

- Be a degree-granting institution that offers graduate-level programs in business and/or management. Management programs are not limited to schools of business. For example, a health management program in a school of public health or an arts management program in a school of arts and sciences may be eligible to receive GMAT scores.
- Be accredited or approved by an authorizing body in the country for which your institution is authorized to provide higher education. In the United States, this may be a regional or national accrediting body. In other locations, this may be a governmental body or ministry/department of education that authorizes your institution to grant degrees.
- Agree to accept the GMAT exam as an admission criterion.

Cost of GMAT Scores

Once your institution is approved, you receive GMAT score reports at no charge. GMAT test takers pay a fee to take the test and to send their scores to your programs.

Application Process

- Submit the completed application form; applications may take up to three (3) weeks to process.
- The GMAT Score Report Website Administrator will be notified via email when the application review process has been completed and will receive login instructions, if approved.
- Upon approval to receive GMAT score reports, you will need to agree to the Terms of Use Agreement for GMAT score report recipients upon the first time logging into the GMAT Score Report Website.
- Please note: GMAC® reserves the right to reject any applicant for failure to meet an eligibility requirement or for any reason it deems appropriate.