

Indicator Book

Ranking Indicators 2015

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Institutional Ranking

Teaching and Learning

Bachelor graduation rate	
<i>Level</i>	Institutional
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of new entrants that successfully completed their bachelor programme.
<i>Rationale</i>	The graduation rate shows how well the university's programmes are organised and reflects the effectiveness of its teaching.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Number of bachelor degrees awarded in period T (2011, 2012, 2013) Number of new entrants in bachelor programmes (in period T-x, x being the standard length of bachelor programmes in years).
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=0}^2 graduates_ba_{t-i}}{\sum_{i=0}^2 new_entrants_ba_{t-x-i}} * 100$

Masters graduation rate

<i>Level</i>	Institutional
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of new entrants that successfully completed their master programme.
<i>Rationale</i>	The graduation rate shows how well the university's programmes are organised and reflects the effectiveness of its teaching.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Number of master degrees awarded in period T (2011, 2012, 2013) Number of new entrants in master programmes (in period T-x, x being the standard length of master programmes in years).
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{graduates_ba_within_normative_time}_i}{\sum_{i=1}^n \text{ba_degrees_awarded}_i} * 100$

Graduating on time (bachelors)

<i>Level</i>	Institutional
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of graduates that graduated within the time expected (normative time) for their bachelor programme.
<i>Rationale</i>	The time to degree reflects how well the university's programmes are organised and shows the effectiveness of its teaching.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Number of graduates that graduated within the time expected for their bachelor programme Number of bachelor degrees awarded
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{graduates_ba_within_normative_time}_i}{\sum_{i=1}^n \text{ba_degrees_awarded}_i} * 100$

Graduating on time (masters)

<i>Level</i>	Institutional
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of graduates that graduated within the time expected (normative time) for their masters programme.
<i>Rationale</i>	The time to degree reflects how well the university's programmes are organised and shows the effectiveness of its teaching.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Number of graduates that graduated within the time expected for their master programme. Number of master degrees awarded
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{graduates_ma_within_normative_time}_i}{\sum_{i=1}^n \text{ma_degrees_awarded}_i} * 100$

Research

Citation rate	
<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	The average number of times that the university's research publications (over the period 2010-2013) get cited in other research, adjusted (normalized) at the global level to take into account differences in publication years and to allow for differences in citation customs across academic fields.
<i>Rationale</i>	Indicator of the scientific impact of research outputs within international scientific communities. The measure takes into account differences in citation customs across academic fields ('normalisation').
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Mean Normalised Citation Rate
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	

Research publications (absolute numbers)

<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	The number of research publications (indexed in the Web of Science database), where at least one author is affiliated to the university.
<i>Rationale</i>	The number of publications in academic journals is a measure of the institution's research activity and its capability in producing research publications at the international level.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	number of research publications
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	

Research publications (size-normalised)

<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	The number of research publications (indexed in the Web of Science database), where at least one author is affiliated to the university (relative to the number of students).
<i>Rationale</i>	The number of publications in academic journals is a measure of the institution's research activity and its capability in producing research publications at the international level. Correcting for the size of the institution (approximated by student enrollments) enables a more fair comparison to other institutions.
<i>Data source</i>	CWTS/Web of Science external sources (IAU database; internet)
<i>Data elements</i>	Number of research publications Number of students enrolled
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{total _ number _ of _ research _ publications}_{2010-2013}}{\text{total _ number _ of _ students _ enrolled}_{2013}}$

External research income

<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	Revenue for research that is not part of a core (or base) grant received from the government. Includes research grants from national and international funding agencies, research councils, research foundations, charities and other non-profit organizations. Measured in € 1,000s, using Purchasing Power Parities (PPP). Expressed per fte academic staff.
<i>Rationale</i>	The indicator expresses the institution's success in attracting grants in national and international competitive, peer reviewed programmes. This reflects the quality of an institution's research.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Revenue for research that is not part of a core (or base) grant received from the government. PPP (GDP) in euros
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n (\text{researchrevenues}_{\text{from external sources}_i} / \text{PPP}(\text{GDP})_{\text{in } \text{€}_i})}{\sum_{i=1}^n \text{fte}_{\text{academic staff}_i}} * 100$

Art related output	
<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	The number of scholarly outputs in the creative and performing arts, relative to the full-time equivalent (fte) number of academic staff.
<i>Rationale</i>	This measure recognises outputs other than research publications and reflects all tangible research-based outputs such as musical compositions, designs, artifacts, software, et cetera.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Number of art related outputs (concerts, exhibitions, artefacts, media productions) Academic staff (fte)
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{art_related_outputs}_i}{\sum_{i=1}^n \text{fte_academic_staff}_i} * 100$

Top cited publications

<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	The proportion of the university's research publications that, compared to other publications in the same field and in the same year, belong to the top 10% most frequently cited.
<i>Rationale</i>	This is a measure of international research excellence. Departments with well over 10% of their publications in the top percentile of frequently cited articles worldwide are among the top research institutes worldwide.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	The number of publications of a university that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited. Total publication output
<i>Time reference</i>	Publications: period 2010 - 2013; citations until 3rd quarter 2014
<i>Formula</i>	$\frac{\textit{score_on_topcited_publications}}{\textit{total_publication_output}} * 100$

Interdisciplinary publications

<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	Percentage of research publications within the field's top 10 % publications with the highest interdisciplinarity scores.
<i>Rationale</i>	The more a publication refers to publications belonging to different fields of science and the larger the distance between these fields, the higher the degree of interdisciplinarity. Given that the frontiers of research are often at the edge of disciplines, the multidisciplinary of research reflects its innovative character.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Interdisciplinary scientific publication output Total publication output
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	<p><i>Interdisciplinarity score of an individual publication</i> : $I^{pub} = \frac{1}{m} \sum_{i,j} d_{ij}$</p> <p>$m$ = number of references in the publication to other WoS - indexed publications d_{ij} = distance between the field of reference i and the field of reference j</p> <p><i>Interdisciplinarity score of an institution</i> : $I^{inst} = \left(\frac{1}{n} \sum_k \# (I_k^{pub} \geq I_{threshold}^{pub}) \right) * 100$</p> <p>$n$ = number of publications of the institution; I_k^{pub} = Interdisciplinarity score of publication k $I_{threshold}^{pub}$ = minimal interdisciplinarity score in order to belong to the 10% publications with the highest interdisciplinarity score</p>

Post-doc positions

<i>Level</i>	Institutional
<i>Dimension</i>	Research
<i>Definition</i>	The number of post-doc positions relative to the number of academic staff (headcount).
<i>Rationale</i>	As post doc positions are often externally (and competitively) funded, an institution with more post-doc positions is more likely to have a higher research quality.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Post doc positions (headcount) Academic staff (headcount)
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{postdoc_positions}_i}{\sum_{i=1}^n \text{fte_academic_staff}_i} * 100$

Co-publications with industrial partners	
<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The percentage of all the university's research publications that list an author affiliate with an address that refers to a for-profit business company.
<i>Rationale</i>	The more research is carried out with external partners the more likely it is that knowledge transfer takes place between academia and business.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	The number of all the university's research publications that list an author affiliate with an address that refers to a for-profit business company. Total publication output
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_co - publications_with_industry}}{\text{total_publication_output}} * 100$

Income from private sources

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	Research revenues and knowledge transfer revenues from private sources (incl. not-for profit organisations), excluding tuition fees. Measured in €1,000s using Purchasing Power Parities. Expressed per fte academic staff.
<i>Rationale</i>	The degree to which research is funded by external, private organisations reflects aspects of its research quality - most notably its success in attracting funding and research contracts from end-user sources.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Revenues of research related contracts and services, consultancies and other project funds from industry/private business; research related revenues from charities, private foundations, trusts and other non-profit organisations; revenues from licensing. PPP (GDP) in euros Academic staff (fte)
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n (\text{revenues_from_private_sources}_i / \text{PPP}(\text{GDP})_in_€_i)}{\sum_{i=1}^n \text{fte_academic_staff}_i} * 100$

Patents awarded (absolute numbers)

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The number of patents assigned to (inventors working in) the university (over the period 2002-2011).
<i>Rationale</i>	The number of patents is an established measure of technology transfer as it indicates the degree to which discoveries and inventions made in academic institutions may be transferred to economic actors for further industrial / commercial development.
<i>Data source</i>	PATSTAT database
<i>Data elements</i>	Counts on the level of patent families
<i>Time reference</i>	Period 2002 - 2011
<i>Formula</i>	

Patents awarded (size-normalised)

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The number of patents assigned to (inventors working in) the university over the period 2002-2011 (per 1,000 students).
<i>Rationale</i>	The number of patents is an established measure of technology transfer as it indicates the degree to which discoveries and inventions made in academic institutions may be transferred to economic actors for further industrial / commercial development. Correcting for the size of the institution (approximated by student enrollments) enables a more fair comparison to other institutions
<i>Data source</i>	PATSTAT database
<i>Data elements</i>	The number of patents assigned to (inventors working in) the institution Total number of students enrolled
<i>Time reference</i>	Period 2002 - 2011
<i>Formula</i>	$\frac{\text{number_of_patents_assigned_to_the_institution}_{2002-2011}}{\text{total_number_of_students_enrolled}_{2013}} * 100$

Industry co-patents

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The percentage of the number of patents assigned to (inventors working in) the university over the period 2002-2011, which were co-applied with at least 1 applicant from the industry.
<i>Rationale</i>	If the university applies for a patent with a private firm this reflects that it shares its knowledge with external partners and shows the extent to which it is willing to share its technological inventions for further commercial development.
<i>Data source</i>	PATSTAT database
<i>Data elements</i>	Patents Co-patents with industry
<i>Time reference</i>	Period 2002 - 2011
<i>Formula</i>	$\frac{\text{number_of_co - patents_with_industry}_{2002-2011}}{\text{total_number_of_patents}_{2002-2011}} * 100$

Spin-offs

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The number of spin-offs (i.e. firms established on the basis of a formal knowledge transfer arrangement between the institution and the firm) recently created by the institution (per 1000 fte academic staff)
<i>Rationale</i>	A new firm that is based on knowledge created in a university signals a successful case of knowledge transfer from academia to industry.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Start-up firms Academic staff (fte)
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{number_of_start_up_firms}_i}{\sum_{i=1}^n \text{fte_academic_staff}_i} * 100$

Publications cited in patents

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The percentage of the university's research publications that were mentioned in the reference list of at least one international patent (as included in the PATSTAT database).
<i>Rationale</i>	This indicator reflects the technological relevance of scientific research at the university, in the sense that it explicitly contributed, in some way, to the development of patented technologies
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Research publications Publications cited in patents
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_publications_cited_in_patents}_{2010-2013}}{\text{total_publication_output}_{2010-2013}} * 100$

Income from continuous professional development

<i>Level</i>	Institutional
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The percentage of the university's total revenues that is generated from activities delivering Continuous Professional Development courses and training.
<i>Rationale</i>	When a university is very active in providing continuing education courses to companies and private individuals it transfers knowledge to its environment.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Total income Income from CPD
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{income_from_CPD}_i}{\sum_{i=1}^n \text{total_income}_i} * 100$

International Orientation

Foreign language bachelor programmes	
<i>Level</i>	Institutional
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of bachelor programmes that are offered in a foreign language.
<i>Rationale</i>	Offering degree programmes in a foreign language signals the commitment of the university to welcome foreign students and to prepare its students for working in an international environment.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Bachelor programmes in foreign language Bachelor programmes
<i>Time reference</i>	Latest year
<i>Formula</i>	$\frac{\text{number_of_ba - programmes_offered_in_foreign_language}}{\text{total_number_of_ba - programmes_offered}} * 100$

Foreign language master programmes

<i>Level</i>	Institutional
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of masters programmes that are offered in a foreign language.
<i>Rationale</i>	Offering masters programmes in a foreign language testifies the commitment of the university to welcome foreign students and to prepare its students for working in an international environment.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Master programmes in foreign language Master programmes offered
<i>Time reference</i>	Latest year
<i>Formula</i>	$\frac{\text{number_of_ma - programmes_offered_in_foreign_language}}{\text{total_number_of_ma - programmes_offered}} * 100$

Student mobility

<i>Level</i>	Institutional
<i>Dimension</i>	International Orientation
<i>Definition</i>	A composite of international incoming exchange students, outgoing exchange students and students in international joint degree programmes.
<i>Rationale</i>	Having an international student body and offering students the opportunity to do part of their degree abroad signals the international orientation of the university.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Incoming students Students sent out in international exchange programmes Students in joint degree programmes Total enrolment
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	<p><i>This indicator consists of three subindicators: the percentage incoming exchange students, the percentage exchange students sent out and the percentage of students in international joint degree programmes. Since the ranges of scores on these indicators differ the scores are normalised (z-scores).</i></p> <p><i>The composite indicator value is calculated as the mean of the normalised scores on the three subindicators. If a score on one or two subindicators is missing, the score is based on two or one subindicator. The resulting composite indicator has a range between -0,8 and 5,3. To create a score that is between 0 and 1 the scores are rescaled. For this rescaling the formula $(x_i - \min) / (\max - \min)$ is used</i></p>

International academic staff

<i>Level</i>	Institutional
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of academic staff (on a headcount basis) with foreign citizenship.
<i>Rationale</i>	Having an international academic staff reflects the international orientation of the university and its attractiveness as an employer for foreign academics.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Academic staff (headcount; excluding doctorate candidates counted as staff) International academic staff (headcount; excluding doctorate candidates counted as staff)
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{academic_staff_with_foreign_nationality_headcount}_i}{\sum_{i=1}^n \text{academic_staff_headcount}_i} * 100$

International joint publications

<i>Level</i>	Institutional
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of the university's research publications that list at least one affiliate author's address in another country.
<i>Rationale</i>	The number of international joint publications reflects the degree to which a university's research is connected to international networks.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	International joint research publications Research publications
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	

International doctorate degrees

<i>Level</i>	Institutional
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of doctorate degrees that are awarded to international doctorate candidates.
<i>Rationale</i>	The number of doctorate degrees awarded to international candidates reflects the international orientation of an institution
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Doctorate degrees awarded to foreign candidates (headcount) Doctorate degrees awarded (headcount)
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{doctorate_degrees_awarded_to_candidates_with_foreign_nationality}_i}{\sum_{i=1}^n \text{total_number_of_doctorate_degrees_awarded}_i} * 100$

Regional Engagement

Student internships in the region	
<i>Level</i>	Institutional
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	Out of all the university's students who did an internship, the percentage where the internship was with a company or organisation located in the region.
<i>Rationale</i>	Internships of students in regional enterprises are a means to build co-operations with regional partners and connect students to the local labour market.
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Internships in regional/local enterprises Internships
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{students_in_internships_in_the_region}_i}{\sum_{i=1}^n \text{students_in_internships}_i} * 100$

Regional joint publications

<i>Level</i>	Institutional
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	The percentage of the university's research publications that list at least one co-author with an affiliate address within close proximity of the institution (within a distance of 50 km).
<i>Rationale</i>	Co-publications with authors located elsewhere in the institution's geographical region are a reflection of regional linkages between the university and regional partners.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Number of research publications that list at least one affiliate address of co-authors in the same 'region' (50 km range) Total publication output
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_regional_co - publications}_{2010-2013}}{\text{total_publication_output}_{2010-2013}}$

Income from regional sources

<i>Level</i>	Institutional
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	The proportion of external research revenues - apart from government or local authority core/recurrent grants – that comes from regional sources (i.e. industry, private organisations, charities).
<i>Rationale</i>	A high proportion of income from regional/local sources indicates a more intense relationship between the university and the region
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	percentage indicated
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	

Bachelor graduates working in the region

<i>Level</i>	Institutional
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	The percentage of bachelor graduates who found their first job (after graduation) in the region where the university is located.
<i>Rationale</i>	If a relatively large number of an institution's graduates is working in the region this reflects strong linkages between the university and its regional partners
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Proportion (or range) indicated.
<i>Time reference</i>	Latest year
<i>Formula</i>	

Master graduates working in the region

<i>Level</i>	Institutional
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	The percentage of masters graduates who found their first job (after graduation) in the region where the university is located.
<i>Rationale</i>	If a relatively large number of an institution's graduates is working in the region this reflects strong linkages between the university and its regional partners
<i>Data source</i>	Institution questionnaire
<i>Data elements</i>	Proportion (or range) indicated.
<i>Time reference</i>	Latest year
<i>Formula</i>	

Field-Based Ranking

Teaching & Learning

Student-staff ratio	
<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	<p>The number of students (headcount) per member of the academic staff (headcount*).</p> <p>*fte for Medicine</p>
<i>Rationale</i>	Indicator for the (expected) intensity of mentoring/tutoring and of contact between students and teachers.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	<p>Number of students (head count)</p> <p>Number of academic staff (head count) - doctoral candidates are excluded</p> <p>For Medicine: fte academic staff; staff involved in research only, staff involved in patient care only and doctoral candidates are excluded</p>
<i>Time reference</i>	Latest academic year
<i>Formula</i>	$\frac{\text{students}_{major} + (\text{students}_{minor} * 0.5)}{\text{Academic_staff_head} - \text{doctoral_candidates_counted_as_staff_head}}$ <p><i>For Medicine : based on fte; staff only involved in research and only involved in patient care are excluded in the denominator</i></p>

Graduating on time (bachelors)

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of graduates that graduated within the time expected (normative time) for their bachelor programme.
<i>Rationale</i>	Although influenced by other factors, too, the possibility to graduate within the norm period of a programme reflects the organisational quality of the programme.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Number of BA graduates within the standard period Total number of BA graduates
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{graduates_ba_within_normative_time}_i}{\sum_{i=1}^n \text{ba_degrees_awarded}_i} * 100$

Graduating on time (masters)

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of graduates that graduated within the time expected (normative time) for their masters programme.
<i>Rationale</i>	Although influenced by other factors, too, the possibility to graduate within the norm period of a programme reflects the organisational quality of the programme.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Number of MA graduates within the standard period; Total number of MA graduates
<i>Time reference</i>	2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{graduates_ma_within_normative_time}_i}{\sum_{i=1}^n \text{ma_degrees_awarded}_i} * 100$

Academic staff with doctorates

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of academic staff holding a doctorate (PhD or equivalent).
<i>Rationale</i>	Highly qualified academic staff is a precondition for high quality education/programmes. In an international perspective it can be measured and compared by reference to the percentage of staff which holds a PhD. A PhD may be seen as a minimum qualification for independent scientific work.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Academic staff (headcount) with a completed PhD (or equivalent) Number of academic staff (head count); doctoral candidates counted as staff are excluded
<i>Time reference</i>	Latest academic year
<i>Formula</i>	$\frac{\text{Academic_staff_with_completed_doctorate_degree}}{\text{Academic_staff} - \text{doctoral_candidates_counted_as_staff}} * 100$

Contact with work environment (bachelors)

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	A composite measure representing at bachelor level: (1) the inclusion of internships or phases of practical experience in the curriculum; and (2) the percentage of students doing an internship; and (3) teaching by practitioners from outside the university departments.
<i>Rationale</i>	The inclusion of work experience and contacts to the work environment is an important factor to enhance the employability of students.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	<p>Inclusion of internships / phases of practical experience in degree programmes</p> <p>Percentage of students doing an internship</p> <p>Percentage of courses delivered by practitioners from outside higher education</p>
<i>Time reference</i>	Current academic year
<i>Formula</i>	

Contact with work environment (masters)

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	A composite measure representing at bachelor level: (1) the inclusion of internships/phases of work; and (2) the percentage of students doing an internship; and (3) teaching by practitioners from outside university departments.
<i>Rationale</i>	Including work experience for students into the programme is an important aspect of enhancing employability.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	<p>Inclusion of internships / phases of practical experience in degree programmes</p> <p>Percentage of students doing an internship</p> <p>Percentage of courses delivered by practitioners from outside higher education</p>
<i>Time reference</i>	Current academic year
<i>Formula</i>	

Innovative forms of assessment

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The percentage of examinations (in medical doctor training programmes) which use innovative forms of assessment (assessment of practical work by faculty and structured clinical cases).
<i>Rationale</i>	This indicator measures the share of forms of assessments of students in medical examinations which are more interactive and focus on medical qualifications and competencies.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Percentage of method faculty/resident rating Percentage of methods objective structured clinical examination (OSCE)
<i>Time reference</i>	Current academic year
<i>Formula</i>	$\% _ \textit{faculty} _ \textit{rating} + \% _ \textit{objective} _ \textit{structured} _ \textit{clinical} _ \textit{examination}$

Hospital beds available for teaching

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The number of beds available for teaching in university hospital and affiliated hospitals per 100 students.
<i>Rationale</i>	
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	<p>Number of beds in university hospitals</p> <p>Number of beds in affiliated hospitals</p> <p>Number of students in medical doctor training programmes</p>
<i>Time reference</i>	Latest year
<i>Formula</i>	$\frac{\text{beds}_{\text{university_hospital}} + (0.5 * \text{beds}_{\text{affiliated_hospital}})}{\frac{\text{number_of_students}}{100}}$

Overall learning experience

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the quality of the overall learning experience, based on a survey of the students.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Overall learning experience
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Quality of courses & teaching

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the quality of teaching provision, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including the breadth of teaching offerings, the quality of basic courses, didactic quality of teaching, interdisciplinary elements, options to chose elective courses, laboratoy courses (engineering only).
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Organisation of program

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the organisation of the programme, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including transparency of entrance requirements/admission regulations, access to classes, average class size, completeness of courses offered compared to the study guide, transparency of the examination system.
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Contact with teachers

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the feedback given by teachers, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including commitment of teaching staff to students, availability of teachers/professors, informal advice and coaching, feedback on homework, assignments and examinations.
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Inclusion of work/practical experience

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the inclusion of work experience and of elements related to work practice, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including opportunities of including a practical work period/an internship, information about relevant professional fields, number of courses related to practice/work.
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Inclusion of practical experience/clerkships (Medicine)

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The integration of practical experience with patient contact into the study programme, based on a student satisfaction survey.
<i>Rationale</i>	The inclusion of practical elements is an important element to enhance the employability of students.
<i>Data source</i>	Student survey
<i>Data elements</i>	
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Library facilities

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the quality of library services for students, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including availability of literature needed for your work, access to on-stock books and academic journals, access to electronic journals, user support, availability of study/reading places, open hours.
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

IT provision	
<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	Student assessment of the quality of IT services for students, based on a student satisfaction survey.
<i>Rationale</i>	The IT provision marks a major aspect of facilities for teaching and learning.
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including hardware and software available, maintenance of the computers, user support, number of available work places
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Room facilities

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of lecture halls and seminar rooms, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including maintenance, technical facilities, number of places available with regard to class size.
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Laboratory facilities

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the quality of laboratories available to students, based on a student satisfaction survey.
<i>Rationale</i>	
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including maintenance of laboratoires, technical facilities, number of places available.
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Bedside teaching

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of bedside teaching concerning mentoring, suitability of rooms and variety of diagnostic techniques applied, based on a student satisfaction survey.
<i>Rationale</i>	The support in and monitoring of bedside teaching by academic staff is an important factor for the quality of medical doctors education.
<i>Data source</i>	Student survey
<i>Data elements</i>	Bed side teaching
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Linking clinical/preclinical teaching

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	The integration of pre-clinical/theoretical and clinical courses, based on a student satisfaction survey.
<i>Rationale</i>	Linking theoretical /pre-clinical and clinical courses is an important element of a good medical doctor education
<i>Data source</i>	Student survey
<i>Data elements</i>	
<i>Time reference</i>	Current student sample
<i>Formula</i>	

Skills Labs

<i>Level</i>	department
<i>Dimension</i>	Teaching & Learning
<i>Definition</i>	An assessment of the skills labs and training centers concerning maintenance, accessibility, technical facilities and mentoring, based on a student satisfaction
<i>Rationale</i>	The access to skills labs is an important factor of modern teaching facilities in medicine.
<i>Data source</i>	Student survey
<i>Data elements</i>	Skills labs
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Research

External research income	
<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	Research revenue that is not part of a core (or base) grant received from the government. Includes research grants from national and international funding agencies, research councils, research foundations, charities and other non-profit organisations. Measured in €1,000s using Purchasing Power Parities (PPP). Expressed per fte academic staff.
<i>Rationale</i>	The indicator expresses the department's success in attracting grants in national and international competitive, peer reviewed programmes. This reflects the quality of its research.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Research income from national and international funding agencies, research councils, research foundations, charities and other non-profit organisations Full time equivalent (fte) number of academic staff; doctoral candidates counted as staff are excluded*
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n external_research_income_i - \sum_{i=1}^n external_research_income_for_professorships_i}{\sum_{i=1}^n fte_academic_staff_i - \sum_{i=1}^n fte_doctoral_candidates_counted_as_staff_i}$ <p>(normalized by Purchasing Power Parity (PPP) and recalculated in Euro)</p> <p>* For Medicine : fte patient care only is also excluded in the denominator</p>

Doctorate productivity

<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	The number of doctorate degrees, relative to the number of academic staff (fte)
<i>Rationale</i>	The number of doctorate degrees may be seen as an expression of the research activity of a higher education institution. The doctorate thesis is a significant research publication.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Number of doctorate degrees awarded Full time equivalent (fte) number of academic staff
<i>Time reference</i>	Three year average 2011- 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{doctorate_degrees}_i}{\sum_{i=1}^n \text{fte_academic_staff}_i - \sum_{i=1}^n \text{fte_doctoral_candidates_counted_as_staff}_i}$ <p><i>For Medicine : fte patient care only is also excluded in the denominator</i></p>

Research publications (absolute numbers)

<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	The number of research publications (indexed in the Web of Science database), where at least one author is affiliated to the university.
<i>Rationale</i>	The number of publications in academic journals is a measure of the institution's research activity and its capability in producing research publications at the international level.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Number of research publications indexed in Thomosn Reuters data base
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	

Citation rate

<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	The average number of times that the university department's research publications (over the period 2010-2013) get cited in other research, adjusted (normalized) at the global level for the field of science and the year in which a publication appeared.
<i>Rationale</i>	Indicator of the scientific impact of research outputs within international scientific communities. The measure takes into account differences in citation customs across academic fields ('normalisation').
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Mean Normalised Citation Rate
<i>Time reference</i>	Publications 2010 - 2013; citations until 3rd quarter 2014
<i>Formula</i>	

Top cited publications

<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	The proportion of the department's research publications that, compared to other publications in the same field and in the same year, belong to the top 10% most frequently cited.
<i>Rationale</i>	This is a measure of international research excellence. Departments with well over 10% of their publications in the top percentile of frequently cited articles worldwide are among the top research institutes worldwide.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	The number of publications of a university that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited Total publication output
<i>Time reference</i>	Publications: period 2010 - 2013; citations until 3rd quarter 2014
<i>Formula</i>	$\frac{\textit{score_on_topcited_publications}}{\textit{total_publication_output}} * 100$

Interdisciplinary publications

<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	Percentage of research publications within the field's top 10 % publications with the highest interdisciplinarity scores.
<i>Rationale</i>	The more a publication refers to publications belonging to different fields of science and the larger the distance between these fields, the higher the degree of interdisciplinarity. Given that the frontiers of research are often at the edge of disciplines, the multidisciplinary of research reflects its innovative character.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Interdisciplinary scientific publication output Total publication output
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	<p><i>Interdisciplinarity score of an individual publication</i> : $I^{pub} = \frac{1}{m} \sum_{i,j} d_{ij}$</p> <p>$m$ = number of references in the publication to other WoS - indexed publications d_{ij} = distance between the field of reference i and the field of reference j</p> <p><i>Interdisciplinarity score of an institution</i> : $I^{inst} = \left(\frac{1}{n} \sum_k \# (I_k^{pub} \geq I_{threshold}^{pub}) \right) * 100$</p> <p>$n$ = number of publications of the institution; I_k^{pub} = Interdisciplinarity score of publication k $I_{threshold}^{pub}$ = minimal interdisciplinarity score in order to belong to the 10% publications with the highest interdisciplinarity score</p>

Research orientation of teaching

<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	The degree to which the education is informed by research in the field (based on a survey of students in the programme).
<i>Rationale</i>	The degree to which education is informed by research reflects the innovative character of the teaching in the programme.
<i>Data source</i>	Student survey
<i>Data elements</i>	Single item research orientation of teaching
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

Post-doc positions	
<i>Level</i>	department
<i>Dimension</i>	Research
<i>Definition</i>	The number of post-doc positions relative to the full-time equivalent number of academic staff.
<i>Rationale</i>	As post doc positions are often externally (and competitively) funded, an institution with more post-doc positions is more likely to have a higher research quality.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Number of post-doc positions (headcount) Full-time equivalent (fte) number of academic staff
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{number_of_post_doc_positions}_i}{\sum_{i=1}^n \text{fte_academic_staff}_i - \text{fte_doctoral_candidates_countes_as_staff}_i}$

Income from private sources	
<i>Level</i>	department
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	Research revenues from private sources as a share of total external research income
<i>Rationale</i>	The degree to which research is funded by external, private organisations reflects aspects of a department’s research quality - most notably its success in attracting funding and research contracts from end-user sources.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Research income from industry/private business; Total external research income
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{income_from_private_business}_i * 100}{\sum_{i=1}^n \text{total_third_party_funds}_i}$

Co-publications with industrial partners

<i>Level</i>	department
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The percentage of all the university's research publications that list an author affiliate with an address that refers to a for-profit business company.
<i>Rationale</i>	The more research is carried out with external partners the more likely it is that knowledge transfer takes place between academia and business.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Co-publications with industrial partners; Total publication output
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_co - publications_with_industry}}{\text{total_publication_output}} * 100$

Patents awarded (absolute numbers)

<i>Level</i>	department
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The number of patents assigned to (inventors working in) the university over the period 2002-2011.
<i>Rationale</i>	The number of patents is an established measure of technology transfer as it indicates the degree to which discoveries and inventions made in academic institutions may be transferred to economic actors for further industrial / commercial development.
<i>Data source</i>	PATSTAT database
<i>Data elements</i>	Counts on the level of patent families
<i>Time reference</i>	Period 2003-2012
<i>Formula</i>	

Publications cited in patents

<i>Level</i>	department
<i>Dimension</i>	Knowledge Transfer
<i>Definition</i>	The percentage of the department's research publications that were cited in the reference list of at least one international patent (as included in the PATSTAT database).
<i>Rationale</i>	This indicator reflects the technological relevance of the department's scientific research, in the sense that it explicitly contributed, in some way, to the development of patented technologies.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Publications cited in patents; Research publications
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_publications_cited_in_patents}_{2010-2013}}{\text{total_publication_output}_{2010-2013}} * 100$

International Orientation

International orientation of bachelor programmes	
<i>Level</i>	department
<i>Dimension</i>	International Orientation
<i>Definition</i>	A composite measure taking into account (1) the existence of joint/dual degree programmes; (2) the inclusion of study periods abroad; (3) the percentage of international (degree and exchange) students; and (4) the percentage of international academic staff.
<i>Rationale</i>	The integration of international learning experiences and learning with international students and teachers are central elements of the internationalisation of teaching & learning.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Existence of joint degree programmes / stay abroad Percentage of international students Percentage of incoming exchange students Percentage of international academic staff
<i>Time reference</i>	Current academic year
<i>Formula</i>	

International orientation of master programmes

<i>Level</i>	department
<i>Dimension</i>	International Orientation
<i>Definition</i>	A composite measure taking into account (1) the existence of joint/dual degree programmes; (2) the inclusion of study periods abroad; (3) the percentage of international (degree and exchange) students; and (4) the percentage of international academic staff.
<i>Rationale</i>	The integration of international learning experiences and learning with international students and teachers are central elements of the internationalisation of teaching & learning.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Existence of joint degree programmes / stay abroad Percentage of international students Percentage of incoming exchange students Percentage of international academic staff
<i>Time reference</i>	Current academic year
<i>Formula</i>	

Opportunities to study abroad

<i>Level</i>	department
<i>Dimension</i>	International Orientation
<i>Definition</i>	An assessment of the opportunities for studying abroad, based on a survey of the students.
<i>Rationale</i>	Students' judgments about their possibilities and the support by their university to arrange a study period or an internship abroad.
<i>Data source</i>	Student survey
<i>Data elements</i>	Several items in the questionnaire including attractiveness of the exchange programme/partner universities, support and advice for studying abroad, financial support, recognition of the results obtained during the study abroad period (e.g. Credits).
<i>Time reference</i>	Current sample of students
<i>Formula</i>	

International doctorate degrees

<i>Level</i>	department
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of doctorate degrees that are awarded to international doctorate candidates.
<i>Rationale</i>	The international orientation of an institution is reflected in the number of doctorate degrees awarded to international candidates.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Number of doctorate degrees awarded to international doctorate candidates (citizenship) Total number of PhDs awarded
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{doctorate_degrees_awarded_to_candidtes_with_foreign_naionality}_i}{\sum_{i=1}^n \text{total_numlør_of_docbrate_degrees_awarded}_i} * 100$

International joint publications

<i>Level</i>	department
<i>Dimension</i>	International Orientation
<i>Definition</i>	The percentage of research publications that list at least one affiliate author's address in another country.
<i>Rationale</i>	The number of international joint publications reflects the degree to which a university's research is connected to international networks.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	International joint research publications Research publications
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_international_co - publications}_{2010-2013}}{\text{total_publication_output}_{2010-2013}} * 100$

International research grants

<i>Level</i>	department
<i>Dimension</i>	International Orientation
<i>Definition</i>	The proportion of external research revenue – including public and private funding organisations and businesses – that comes from other countries.
<i>Rationale</i>	The existence of research projects that are funded by foreign and international sources is a good indicator of the international orientation of research activities.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Research revenues from international sources (public and private funding organisations and firms from abroad); Total external research income
<i>Time reference</i>	Three year average 2011 - 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{external_research_funds_from_international_sources}_i}{\sum_{i=1}^n \text{total_external_research_funds}_i} * 100$

Regional Engagement

Student internships in the region	
<i>Level</i>	department
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	Out of the students who did an internship, the percentage where the internship was with a company or organisation located in the region (Applied only to Psychology and Computer Science.)
<i>Rationale</i>	Internships of students in regional enterprises are a means to build co-operations with regional partners and connect students to the local labour market.
<i>Data source</i>	Department questionnaire
<i>Data elements</i>	Number of students who did an internship in the region Total number of students who did an internship
<i>Time reference</i>	Three year average 2011- 2013
<i>Formula</i>	$\frac{\sum_{i=1}^n \text{students_in_internships_in_the_region}_i}{\sum_{i=1}^n \text{students_in_internships}_i} * 100$

Regional joint publications

<i>Level</i>	department
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	The percentage of research publications that list at least one co-author with an affiliate address within close proximity of the institution (within a distance of 50 km).
<i>Rationale</i>	Co-publications with authors located elsewhere in the region are a reflection of regional linkages between the university and regional partners.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Number of research publications that list at least one affiliate address of co-authors in the same region; Total number of academic publications
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_regional_co - publications}_{2010-2013}}{\text{total_publication_output}_{2010-2013}}$

