

# A Universidade do Porto no ShanghaiRanking's Global Ranking of Academic Subjects (GRAS) 2018

Universidade do Porto. Reitoria.  
Gabinete de estudos estratégicos e melhoria contínua  
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# A Universidade do Porto no ShanghaiRanking's Global Ranking of Academic Subjects (GRAS) 2018

<http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/index.html>

## 1. Metodologia do ShanghaiRanking's Global Ranking of Academic Subjects 2018

"Methodology for ShanghaiRanking's Global Ranking of Academic Subjects 2018"

### Ranking Subjects

In 2018 Global Ranking of Academic Subjects, institutions are ranked in 54 subjects across Natural Sciences, Engineering, Life Sciences, Medical Sciences, and Social Sciences.

NATURAL SCIENCES	ENGINEERING
<p>Mathematics Physics</p> <p>Chemistry Earth Sciences</p> <p>Geography Oceanography</p> <p>Ecology Atmospheric Science</p>	<p>Mechanical Engineering Electrical &amp; Electronic Engineering</p> <p>Automation &amp; Control Telecommunication Engineering</p> <p>Instruments Science &amp; Technology Biomedical Engineering</p> <p>Computer Science &amp; Engineering Civil Engineering</p> <p>Chemical Engineering Materials Science &amp; Engineering</p> <p>Nanoscience &amp; Nanotechnology Energy Science &amp; Engineering</p> <p>Environmental Science &amp; Engineering Water Resources</p> <p>Food Science &amp; Technology Biotechnology</p> <p>Aerospace Engineering Marine/Ocean Engineering</p> <p>Transportation Science &amp; Technology Remote Sensing</p> <p>Mining &amp; Mineral Engineering Metallurgical Engineering</p>
LIFE SCIENCES	
<p>Biological Sciences</p> <p>Human Biological Sciences</p> <p>Agricultural Sciences</p> <p>Veterinary Sciences</p>	
MEDICAL SCIENCES	SOCIAL SCIENCES
<p>Clinical Medicine</p> <p>Public Health</p> <p>Dentistry &amp; Oral Sciences</p> <p>Nursing Medical Technology</p> <p>Pharmacy &amp; Pharmaceutical Sciences</p>	<p>Economics Statistics Law Political Sciences Sociology</p> <p>Education Communication Psychology</p> <p>Business Administration Finance Management</p> <p>Public Administration Hospitality &amp; Tourism Management</p> <p>Library &amp; Information Science</p>

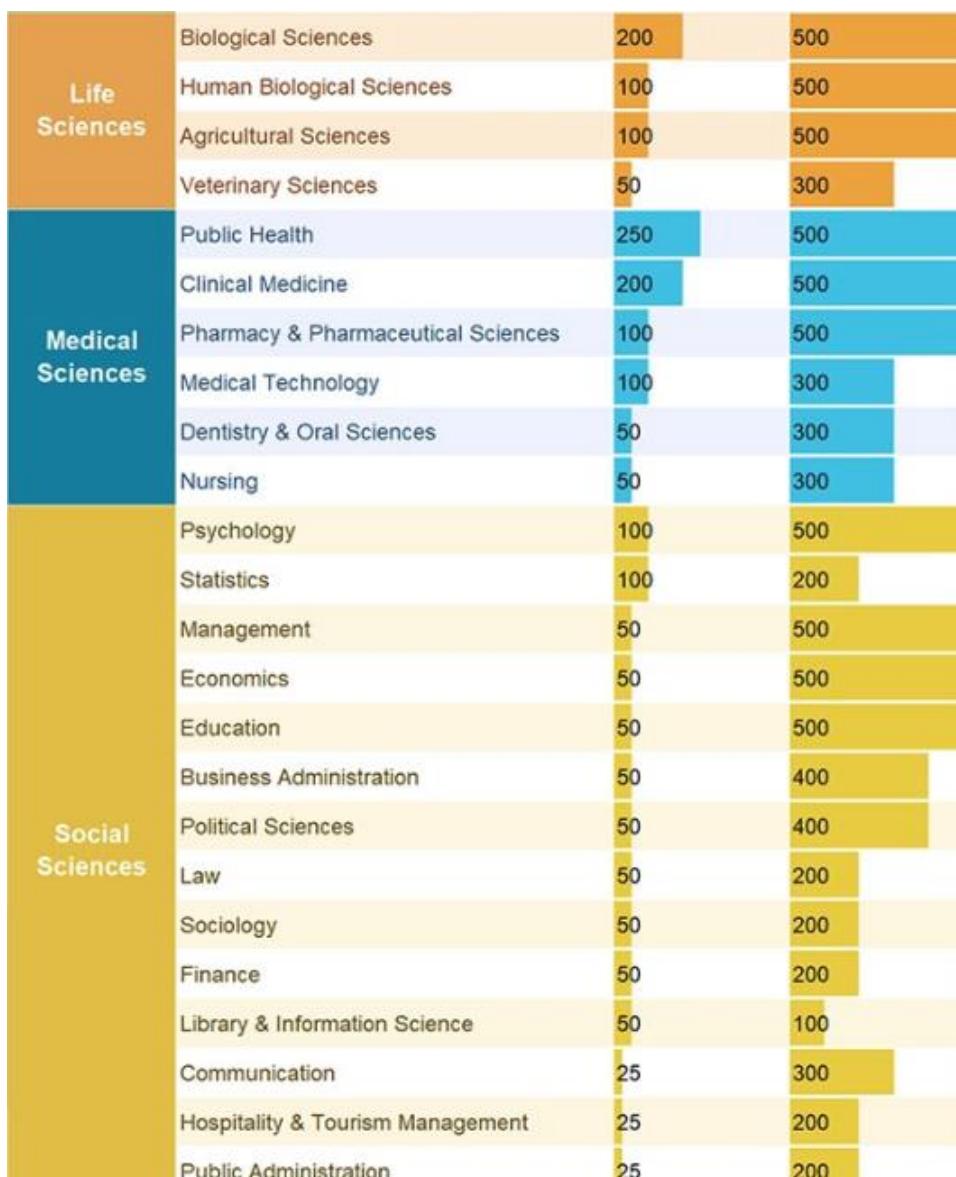


2018 SHANGHAIRANKING'S  
GLOBAL RANKING OF ACADEMIC SUBJECTS

## Selection of Universities

To be included in a subject ranking, the universities need to have a minimum number of research publications during the period of 2012-2016. The publication threshold is different for different subjects. Bibliometric data are collected from Web of Science and InCites. Web of Science categories are mapped to 54 academic subjects. Details can be found [here](#). [ver Anexo [4.1 Mapping between Web of Science categories and 54 academic subjects](#)]

Fields	Subjects	Publication Threshold	Listed Universities
Natural Sciences	Physics	300	500
	Chemistry	200	500
	Mathematics	100	500
	Earth Sciences	100	500
	Ecology	100	400
	Geography	100	200
	Atmospheric Science	50	400
	Oceanography	50	200
Engineering	Materials Science & Engineering	200	500
	Environmental Science & Engineering	200	500
	Computer Science & Engineering	150	500
	Electrical & Electronic Engineering	150	500
	Nanoscience & Nanotechnology	150	400
	Energy Science & Engineering	100	500
	Biotechnology	100	500
	Chemical Engineering	100	500
	Mechanical Engineering	100	300
	Food Science & Technology	100	300
	Biomedical Engineering	100	300
	Civil Engineering	100	300
	Instruments Science & Technology	100	300
	Telecommunication Engineering	100	200
	Water Resources	100	200
	Metallurgical Engineering	100	200
	Automation & Control	100	200
	Transportation Science & Technology	50	200
	Remote Sensing	50	100
	Aerospace Engineering	50	50
	Marine/Ocean Engineering	50	50
	Mining & Mineral Engineering	25	100



2018 SHANGHAIRANKING'S GLOBAL RANKING OF ACADEMIC SUBJECTS-  
PUBLICATION THRESHOLD AND LISTED UNIVERSITIES

## Indicators and Weights

Different weights are allocated to the indicators for different subjects, as listed below. For each indicator, institutions are calculated as a percentage of the top scored institution, then the square root of the percentage is multiplied by the allocated weight. A final score is arrived by adding scores for all indicators and the final score is ranked in descending order.

	PUB	CNCI	IC	TOP	AWARD	
Physics	100	100	20	100	100	Natural Sciences
Chemistry	100	100	20	100	100	
Mathematics	100	100	20	100	100	
Earth Sciences	100	100	20	100	100	
Ecology	100	100	20	100		
Atmospheric Science	100	100	20	100		
Geography	100	100	20	100		
Oceanography	100	100	20	100		
Materials Science & Engineering	100	100	20	100	100	
Environmental Science & Engineering	100	100	20	100	100	
Electrical & Electronic Engineering	100	100	20	100	100	
Computer Science & Engineering	100	100	20	100	100	
Chemical Engineering	100	100	20	100	100	
Mechanical Engineering	100	100	20	100	100	
Biomedical Engineering	100	100	20	100	100	
Civil Engineering	100	100	20	100	100	
Automation & Control	100	100	20	100	100	
Nanoscience & Nanotechnology	100	100	20	100		
Instruments Science & Technology	100	100	20	100		
Food Science & Technology	100	100	20	100		
Telecommunication Engineering	100	100	20	100		
Metallurgical Engineering	100	100	20	100		
Transportation Science & Technology	100	100	20	100		
Remote Sensing	100	100	20	100		
Mining & Mineral Engineering	100	100	20	100		
Aerospace Engineering	100	100	20	100		
Marine/Ocean Engineering	100	100	20	100		
Energy Science & Engineering	100	100	20	100		
Biotechnology	100	100	20	100		
Water Resources	100	100	20	100	20	
Biological Sciences	100	100	20	100	100	Life Sciences
Veterinary Sciences	100	100	20	100		
Human Biological Sciences	100	100	20	100		
Agricultural Sciences	100	100	20	100		
Clinical Medicine	100	100	20	100	100	
Dentistry & Oral Sciences	100	100	20	100	100	
Public Health	100	100	20	100		
Medical Technology	100	100	20	100		
Pharmacy & Pharmaceutical Sciences	100	100	20	100		
Nursing	100	100	20	100	20	
Psychology	150	50	10	100		
Education	150	50	10	100		
Management	150	50	10	100		
Business Administration	150	50	10	100		
Communication	150	50	10	100		
Law	150	50	10	100		
Sociology	150	50	10	100		
Finance	150	50	10	100		
Public Administration	150	50	10	100		
Library & Information Science	150	50	10	100		
Political Sciences	150	50	10	100	20	
Hospitality & Tourism Management	150	50	10	100	20	
Statistics	150	50	10	100	100	
Economics	150	50	10	100	100	



2018 SHANGHAI RANKING'S  
GLOBAL RANKING OF ACADEMIC SUBJECTS--INDICATORS AND WEIGHTS

## Definition of Indicators

Indicators	Definition
PUB	PUB is the number of papers authored by an institution in an Academic Subject during the period of 2012-2016. Only papers of 'Article' type are considered. Data are collected from Web of Science and InCites. Papers in different Web of Science categories are grouped into relevant Academic Subjects ( <b>Classification of Web of Science Categories into Academic Subjects</b> ).
CNCI	Category Normalized Citation Impact (CNCI) is the ratio of citation of papers published by an institution in an Academic Subject during the period of 2012-2016 to the average citations of papers in the same category, of the same year and same type. A CNCI value of 1 represents world-average performance while a value above 1 represents performance above the world average. Only papers of 'Article' type are considered. Data are collected from InCites database.
IC	International collaboration (IC) is the number of publications that have been found with at least two different countries in addresses of the authors divided by the total number of publications in an Academic Subject for an institution during the period of 2012-2016. Only papers of 'Article' type are considered. Data are collected from InCites database.
TOP	TOP is the number of papers published in Top Journals in an Academic Subject for an institution during the period of 2012-2016. Top Journals are identified through ShanghaiRanking's Academic Excellence Survey or by Journal Impact Factor. In 2018, 123 top journals selected by the Survey are used in rankings of 41 Academic Subjects. In Computer Science & Engineering, 14 selected top conferences are also taken into account this year. The list of the top journals and conferences can be found <a href="#">here</a> . [Ver Anexo <a href="#">4.2 ShanghaiRanking Academic Excellence Survey 2018 Top Journals &amp; Conferences</a> ] For Academic Subjects that do not have journals identified by the Survey, the JCR top 20% journals are used. Top 20% journals are defined as their Journal Impact Factors in the top 20% of each Web of Science category according to Journal Citation Report (JCR) 2016, and then aggregated into different Academic Subjects. Only papers of 'Article' type are considered.
AWARD	AWARD refers to the total number of the staff of an institution winning a significant award in an Academic Subject since 1981. Staff is defined as those who work full-time at an institution at the time of winning the prize. If a researcher retired at the time of winning the award, we count the institution where the researcher's last full-time academic position was at. The significant awards in each subject are identified through <b>ShanghaiRanking's Academic Excellence Survey</b> . The list of the significant awards in each subject can be viewed <a href="#">here</a> . [Ver Anexo <a href="#">4.3 ShanghaiRanking Academic Excellence Survey 2018 Top Award</a> ] If a winner is affiliated with more than one institution at the time of winning the award, each institution is assigned the reciprocal of the number of institutions. If the award is awarded to more than one winner in one year, weights are set for winners according to their proportion of the prize. Different weights are set according to the periods of winning the prizes. The weight is 100% for winners in 2011-2016, 75% for winners in 2001-2010, 50% for winners in 1991-2000, and 25% for winners in 1981-1990.

## Data Sources

Indicators	Sources
PUB	InCites database <a href="https://incites.thomsonreuters.com/#/analytics">https://incites.thomsonreuters.com/#/analytics</a>
CNCI	InCites database <a href="https://incites.thomsonreuters.com/#/analytics">https://incites.thomsonreuters.com/#/analytics</a>
IC	InCites database <a href="https://incites.thomsonreuters.com/#/analytics">https://incites.thomsonreuters.com/#/analytics</a>
TOP	InCites database <a href="https://incites.thomsonreuters.com/#/analytics">https://incites.thomsonreuters.com/#/analytics</a>
AWARD	Fields Medal <a href="http://www.mathunion.org/general/prizes/fields/details/">http://www.mathunion.org/general/prizes/fields/details/</a> The Abel Prize <a href="http://www.abelprize.no/">http://www.abelprize.no/</a> Nobel Prize in Physics <a href="http://www.nobelprize.org/nobel_prizes/">http://www.nobelprize.org/nobel_prizes/</a> Nobel Prize in Chemistry <a href="http://www.nobelprize.org/nobel_prizes/">http://www.nobelprize.org/nobel_prizes/</a> Priestley Medal <a href="http://www.acs.org/content/acs/en/funding-and-awards/awards/national/bytopic/priestley-medal.html">http://www.acs.org/content/acs/en/funding-and-awards/awards/national/bytopic/priestley-medal.html</a>

Indicators	Sources
Wolf Prize in Chemistry <a href="http://www.wolffund.org.il/index.php?dir=site&amp;page=content&amp;sub=p&amp;cs=3052">http://www.wolffund.org.il/index.php?dir=site&amp;page=content&amp;sub=p&amp;cs=3052</a>	
Crafoord Prize in Geosciences <a href="http://www.crafoordprize.se/">http://www.crafoordprize.se/</a>	
Timoshenko Medal <a href="https://www.asme.org/about-asme/get-involved/honors- awards/achievement-awards/timoshenko-medal">https://www.asme.org/about-asme/get-involved/honors- awards/achievement-awards/timoshenko-medal</a>	
ASME Medal <a href="https://www.asme.org/about-asme/get-involved/honors-awards/achievement-awards/asme-medal">https://www.asme.org/about-asme/get-involved/honors-awards/achievement-awards/asme-medal</a>	
IEEE Medal of Honor <a href="http://www.ieee.org/about/awards/medals/medalofhonor.html">http://www.ieee.org/about/awards/medals/medalofhonor.html</a>	
IEEE Control Systems Award <a href="https://www.ieee.org/about/awards/tfas/controlsys.html">https://www.ieee.org/about/awards/tfas/controlsys.html</a>	
Pritzker Distinguished Lectureship Award <a href="http://www.bmes.org/awards#Pritzker Distinguished Lecture Award">http://www.bmes.org/awards#Pritzker Distinguished Lecture Award</a>	
A.M. Turing Award <a href="http://amturing.acm.org/">http://amturing.acm.org/</a>	
International Award of Merit in Structural Engineering <a href="http://www.iabse.org/IABSE/IABSE Association/Awards/Award_of_Merit/IABSE/association/Award_files/International_Award_of_Merit_in_Structural_Engineering/Merit.aspx?hkey=4e67443b-411c-4a37-9e42-0c99b434d5f1">http://www.iabse.org/IABSE/IABSE Association/Awards/Award_of_Merit/IABSE/association/Award_files/International_Award_of_Merit_in_Structural_Engineering/Merit.aspx?hkey=4e67443b-411c-4a37-9e42-0c99b434d5f1</a>	
Andreas Acrivos Award for Professional Progress in Chemical Engineering <a href="https://www.aiche.org/community/awards/andreas-acrivos-award- professional-progress-chemical-engineering">https://www.aiche.org/community/awards/andreas-acrivos-award- professional-progress-chemical-engineering</a>	
MRS Medal Award <a href="http://www.mrs.org/medal/">http://www.mrs.org/medal/</a>	
Von Hippel Award <a href="http://www.mrs.org/vonhippel/">http://www.mrs.org/vonhippel/</a>	
Stockholm Water Prize <a href="http://www.siwi.org/prizes/stockholmwaterprize/">http://www.siwi.org/prizes/stockholmwaterprize/</a>	
Robert E. Horton Medal <a href="https://honors.agu.org/medals-awards/robert-e-horton-award/">https://honors.agu.org/medals-awards/robert-e-horton-award/</a>	
Nobel Prize in Physiology or Medicine <a href="http://www.nobelprize.org/nobel_prizes/">http://www.nobelprize.org/nobel_prizes/</a>	
Lasker~DeBakey Clinical Medical Research Award <a href="http://www.laskerfoundation.org/awards/#name=&amp;award=Clinical&amp;year=">http://www.laskerfoundation.org/awards/#name=&amp;award=Clinical&amp;year=</a>	
IADR Distinguished Scientist Award <a href="http://www.iadr.org/IADR/Awards/Grants-Awards/Distinguished- Scientist">http://www.iadr.org/IADR/Awards/Grants-Awards/Distinguished- Scientist</a>	
Nurse Researcher Hall of Fame <a href="https://www.sigmanursing.org/advance-elevate/awards/nurse-researcher-awards">https://www.sigmanursing.org/advance-elevate/awards/nurse-researcher-awards</a>	
The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel <a href="http://www.nobelprize.org/nobel_prizes/">http://www.nobelprize.org/nobel_prizes/</a>	
COPSS Presidents' Award <a href="http://community.amstat.org/copss/home">http://community.amstat.org/copss/home</a>	
The Johan Skytte Prize in Political Science <a href="http://www.skytteprize.com/">http://www.skytteprize.com/</a>	
Ulysses Prize <a href="http://know.unwto.org/content/unwto-ulisses-prize-excellence-creation-and-dissemination-knowledge">http://know.unwto.org/content/unwto-ulisses-prize-excellence-creation-and-dissemination-knowledge</a>	

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<sup>1</sup> In <http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/Methodology-for-ShanghaiRanking-Global-Ranking-of-Academic-Subjects-2018.html> acedido 17 de julho de 2018.

## 2. Evolução<sup>2</sup> da Universidade do Porto no ShanghaiRanking's Global Ranking of Academic Subjects

Evolução das posições

	2017				2018			
	World rank	Euro rank	IbAm rank	PT rank	World rank	Euro rank	IbAm rank	PT rank
<b>NATURAL SCIENCES</b>								
Mathematics	401-500	188-231	29-35	4	n/c			
Physics	401-500	187-224	31-39	4-5	401-500	187-223	31-38	4-5
Chemistry	201-300	72-122	7-17	1-3	301-400	118-167	16-21	3-4
Earth Sciences	n/c				n/c			
Geography	n/c				n/c			
Ecology	101-150	42-70	3-6	1-2	101-150	49-72	3-6	1-2
Oceanography (novo 2018)					151-200	66-82	11-20	4-5
Atmospheric Science (novo 2018)					301-400	138-164	17-23	3-4
<b>ENGINEERING</b>								
Mechanical Engineering	151-200	51-67	3-6	2	151-200	46-59	4-7	2
Electrical & Electronic Engineering	201-300	67-104	10-18	3	301-400	94-129	15-27	3-4
Automation & Control	n/c				101-150	34-45	6-9	2-3
Telecommunication Engineering	n/c				n/c			
Instruments Science & Technology	151-200	61-81	13-18	3	151-200	53-74	11-17	3
Biomedical Engineering	151-200	51-70	4-6	2	101-150	27-47	1-3	1-2
Computer Science & Engineering	101-150	33-50	6-9	2	401-500	151-198	23-32	4-6
Civil Engineering	201-300	56-93	11-17	5-6	101-150	22-38	6-8	4
Chemical Engineering	29	7	1	1	41	7	1	1
Materials Science & Engineering	201-300	69-120	5-10	1-3	201-300	67-112	4-9	1-2
Nanoscience & Nanotechnology	n/c				301-400	96-119	9-18	2-4
Energy Science & Engineering	201-300	64-108	8-16	2-3	201-300	61-99	6-14	2-3
Environmental Science & Engineering	151-200	50-68	6-8	2-3	151-200	49-70	7-8	2-3
Water Resources	151-200	61-77	8-10	2	n/c			
Food Science & Technology	11	4	3	1	12	3	3	1
Biotechnology	201-300	74-115	8-14	3-4	151-200	48-69	5-8	1-3
Aerospace Engineering	n/c				n/c			
Marine/Ocean Engineering	n/c				n/c			
Transportation Science & Technology	n/c				151-200	44-59	9-11	3
Remote Sensing	n/c				n/c			
Mining & Mineral Engineering	n/c				n/c			
Metallurgical Engineering	n/c				n/c			

<sup>2</sup> Retirado de <http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/index.html> em 3 e 4 de julho de 2017, GRAS 2017; de 17 a 19 de julho de 2018, GRAS 2018.

	2017				2018			
	World rank	Euro rank	IbAm rank	PT rank	World rank	Euro rank	IbAm rank	PT rank
<b>LIFE SCIENCES</b>								
Biological Science	201-300	103-143	5-8	1-2	151-200	70-95	4-5	1-2
Human Biological Sciences	201-300	98-142	4-11	1-3	201-300	96-138	4-11	1-3
Agricultural Sciences	151-200	67-93	13-16	2	151-200	68-94	15-17	2
Veterinary Sciences	51-75	30-40	6-10	1	51-75	27-37	6-9	1-2
<b>MEDICAL SCIENCES</b>								
Clinical Medicine	301-400	154-197	8-16	1-2	301-400	149-189	11-21	1-2
Public Health	151-200	55-71	5-8	1	151-200	61-74	5-7	1
Dentistry & Oral Sciences	n/c				201-300	82-118	19-37	1
Nursing	n/c				n/c			
Medical Technology	n/c				n/c			
Pharmacy & Pharmaceutical Sciences	76-100	37-46	3	1	51-75	36-43	2-3	1
<b>SOCIAL SCIENCES</b>								
Economics	n/c				201-300	92-142	6-15	1-4
Statistics	n/c				n/c			
Law	n/c				n/c			
Political Sciences	n/c				n/c			
Sociology	n/c				n/c			
Education	n/c				301-400	80-120	7-16	2-3
Communication	n/c				n/c			
Psychology	n/c				401-500	164-211	15-20	5-6
Business Administration	n/c				n/c			
Finance	n/c				n/c			
Management	301-400	96-135	14-23	3-4	301-400	105-148	18-24	3-4
Public Administration	n/c				n/c			
Hospitality & Tourism Management	n/c				n/c			
Library & Information Science	n/c				n/c			

n/c - não consta

## Evolução dos scores

	2017						2018					
	TotalSc	PUB	CNCI	IC	TOP	AWARD	TotalSc	PUB	CNCI	IC	TOP	AWARD
<b>NATURAL SCIENCES</b>												
Mathematics		39,4	51,9	72,2	0	0						
Physics		35,7	45	86,3	12,7	0		36,5	57,7	86,9	16	0
Chemistry		52	60,2	72,4	11	0		50,9	61,5	73,3	11,1	0
Earth Sciences												
Geography												
Ecology		57,3	60,2	89,4	49,1	n/a		60,1	62,7	60,1	30,9	n/a
Oceanography (novo 2018)								35,6	62	82,4	19,4	n/a
Atmospheric Science(novo 2018)								19	53,9	19	14,7	n/a
<b>ENGINEERING</b>												
Mechanical Engineering		36,9	67	63,4	15,9	0		36,4	56,5	64,5	19,6	0
Electrical & Electronic Engineering		31,5	51,6	76,3	21,6	0		30	62,5	76,2	0	0
Automation & Control								32	41,5	72	31,8	0
Telecommunication Engineering												
Instruments Science & Technology		39,9	51,1	72,1	42,2	n/a		38,7	53,1	73,2	39,2	n/a
Biomedical Engineering		36,8	61,6	66,3	26,3	0		39,1	63,2	67,2	31,8	0
Computer Science & Engineering		41,3	53,4	68,6	89,4	0		41,2	47,9	69,1	0	0
Civil Engineering		46,8	42,4	64,8	0	0		44,6	39,9	57,6	21,8	0
Chemical Engineering	196,2	63,9	61,5	73,1	56,2	0	174,6	59,1	56,1	73,3	44,6	0
Materials Science & Engineering		38,9	65	72	14	0		38,5	65,4	72,3	13,5	0
Nanoscience & Nanotechnology								29,5	62,3	82,1	10,8	n/a
Energy Science & Engineering		34,7	65,5	79,5	16,9	n/a		34,1	63,1	80,3	16,3	n/a
Environmental Science & Engineering		67,6	62,9	67,3	17,1	0		66	64,6	67,8	15,7	0
Water Resources		39,7	62,8	65,6	36,3	n/a						
Food Science & Technology	239	69,2	77	60,1	80,8	n/a	231,3	67,7	74,3	63,7	76,5	n/a
Biotechnology		46	42,2	70,8	30,9	n/a		48	44	70,8	31,1	n/a
Aerospace Engineering												
Marine/Ocean Engineering												
Transportation Science & Technology								33,2	62,8	61,6	33,8	n/a
Remote Sensing												
Mining & Mineral Engineering												
Metallurgical Engineering												

	2017						2018					
	TotalSc	PUB	CNCI	IC	TOP	AWARD	TotalSc	PUB	CNCI	IC	TOP	AWARD
<b>LIFE SCIENCES</b>												
Biological Science		40,7	40,5	79,9	11,1	0		41,5	44,6	80,3	6,9	0
Human Biological Sciences		27,1	60,8	72,9	19,3	n/a		27,6	60,8	74,2	20	n/a
Agricultural Sciences		39,7	62,2	77,2	36,1	n/a		39,5	62,7	79,6	35,6	n/a
Veterinary Sciences		31,2	85,3	76,1	29,9	n/a		31,2	83,6	76,8	34,3	n/a
<b>MEDICAL SCIENCES</b>												
Clinical Medicine		22,2	60,7	66,4	9,1	0		22,7	64,2	67,3	14	0
Public Health		27,8	39,4	69	23,5	n/a		28	53,3	70,3	9,6	n/a
Dentistry & Oral Sciences								22,2	56,1	64,4	14,4	0
Nursing												
Medical Technology												
Pharmacy & Pharmaceutical Sciences		63,5	59,6	71,6	0	0		65,5	61,3	70,9	0	n/a
<b>SOCIAL SCIENCES</b>												
Economics								37,4	41,6	60,3	6,7	0
Statistics												
Law												
Political Sciences												
Sociology												
Education								38,4	50,9	57,8	0	n/a
Communication												
Psychology								29,7	59	75,6	0	n/a
Business Administration												
Finance												
Management		40,9	53,3	78,2	0	n/a		44	57,9	78	0	n/a
Public Administration												
Hospitality & Tourism Management												
Library & Information Science												

n/a – não aplicável

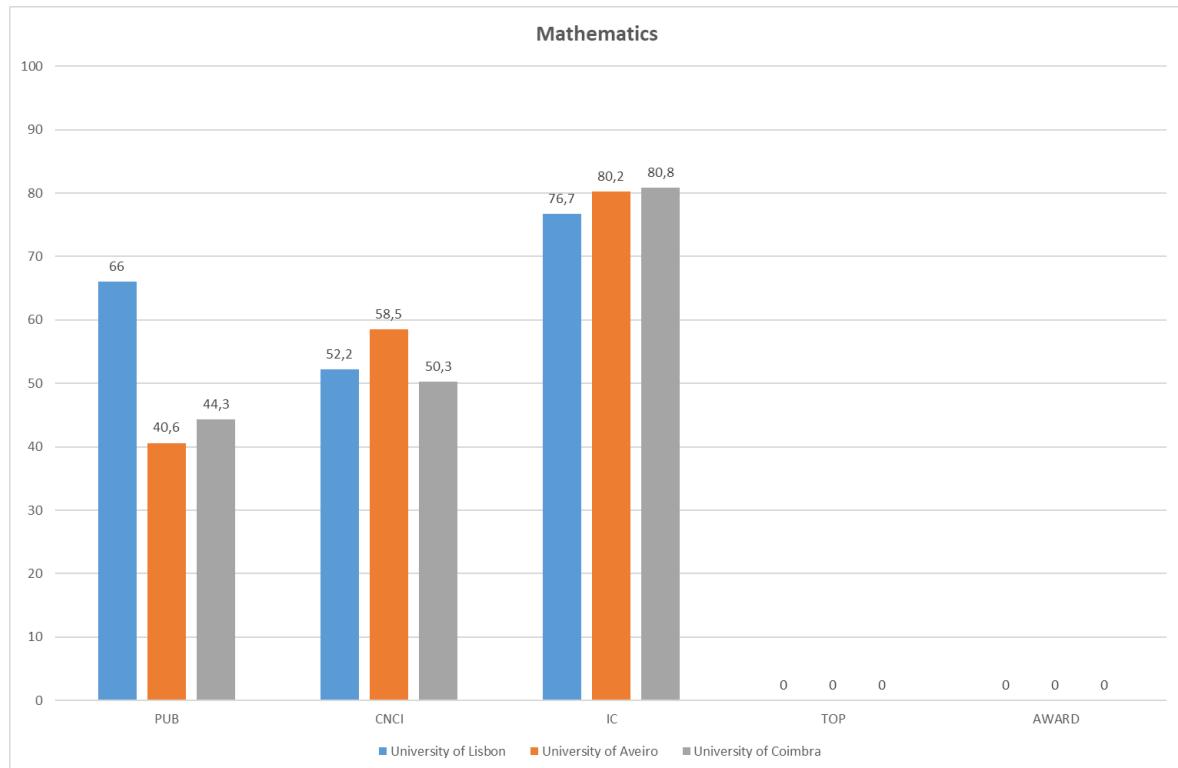
### 3. As Universidades portuguesas no ShanghaiRanking's Global Ranking of Academic Subjects 2018

#### 3.1 NATURAL SCIENCES

##### 3.1.1 Mathematics

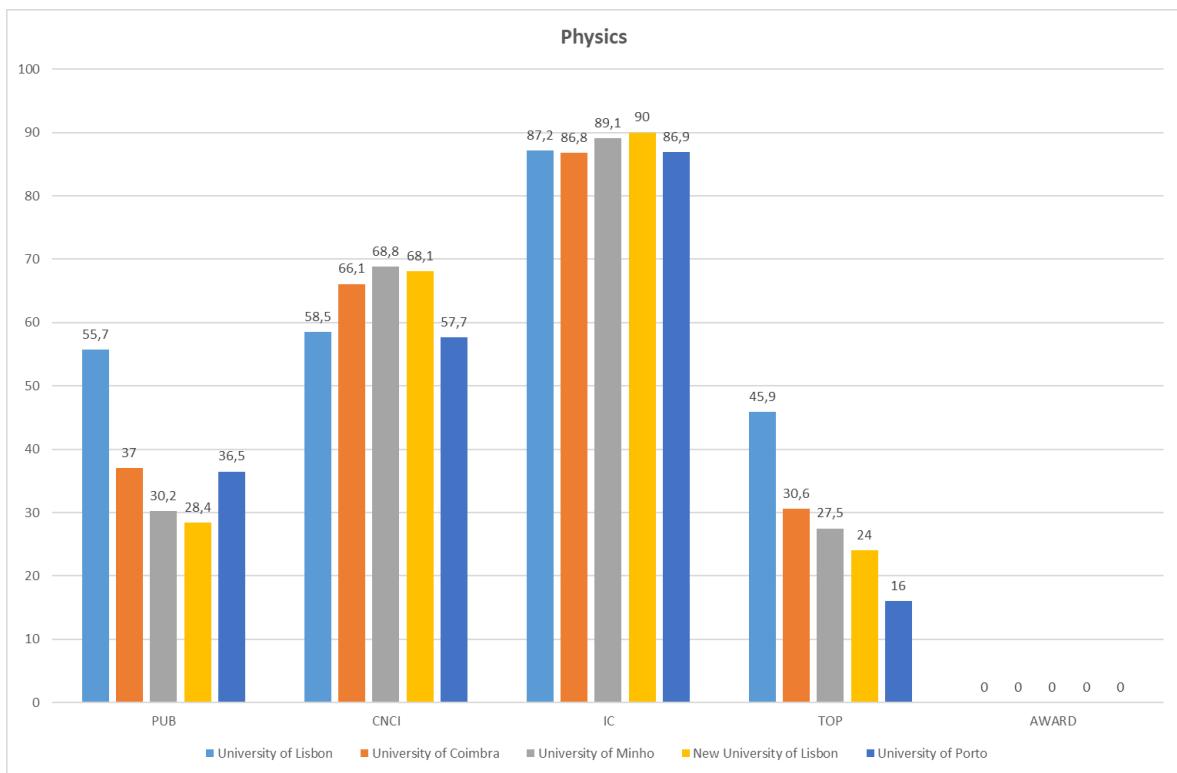
World Rank 2018	World Rank 2017	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
151-200	76-100	69-96	8	1	University of Lisbon		66	52.2	76.7	0	0
301-400	201-300	145-197	20-30	2	University of Aveiro		40.6	58.5	80.2	0	0
301-400	301-400	145-198	20-31	3	University of Coimbra		44.3	50.3	80.8	0	0
n/c	401-500				University of Porto						
500	500	226	37	3	Nº IES						

n/c - não consta



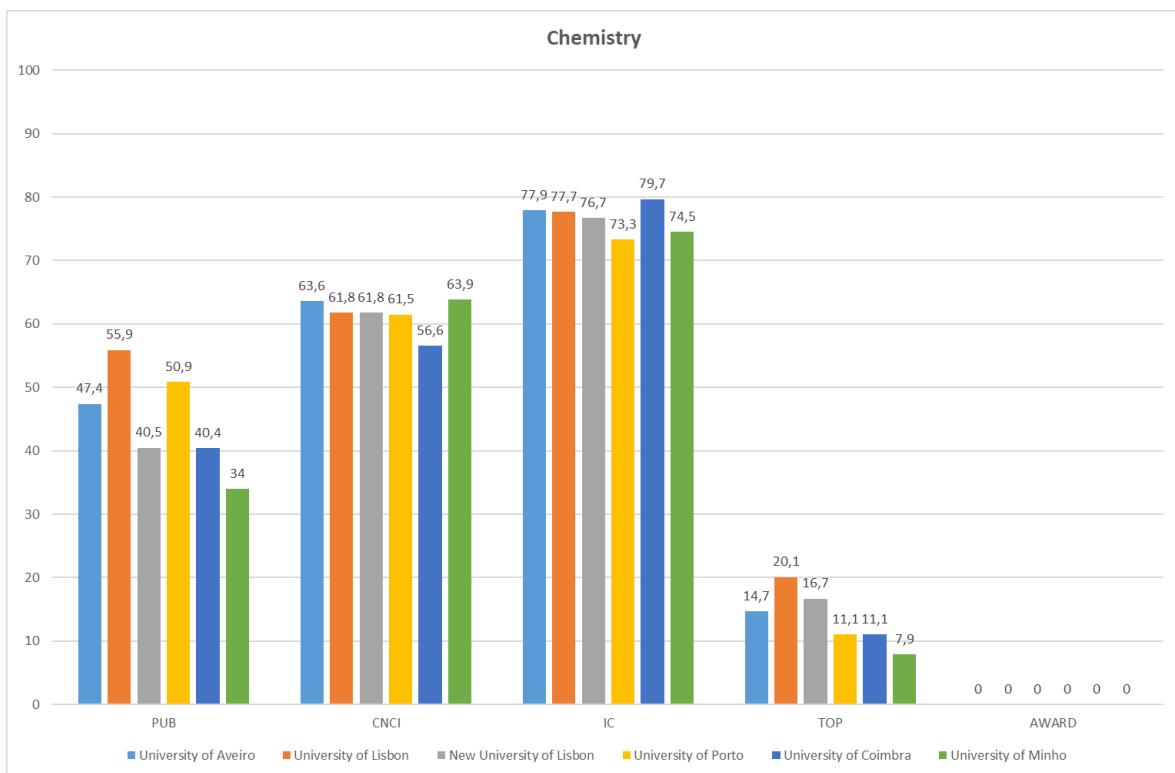
### 3.1.2 Physics

World Rank 2018	World Rank 2017	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
101-150	101-150	49-74	2-4	1	University of Lisbon		55,7	58,5	87,2	45,9	0
301-400	301-400	147-186	21-30	2-3	University of Coimbra		37	66,1	86,8	30,6	0
301-400	301-400	147-186	21-30	2-3	University of Minho		30,2	68,8	89,1	27,5	0
401-500	401-500	187-223	31-38	4-5	New University of Lisbon		28,4	68,1	90	24	0
401-500	401-500	187-223	31-38	4-5	University of Porto		36,5	57,7	86,9	16	0
500	500	223	38	5	Nº IES						



### 3.1.3 Chemistry

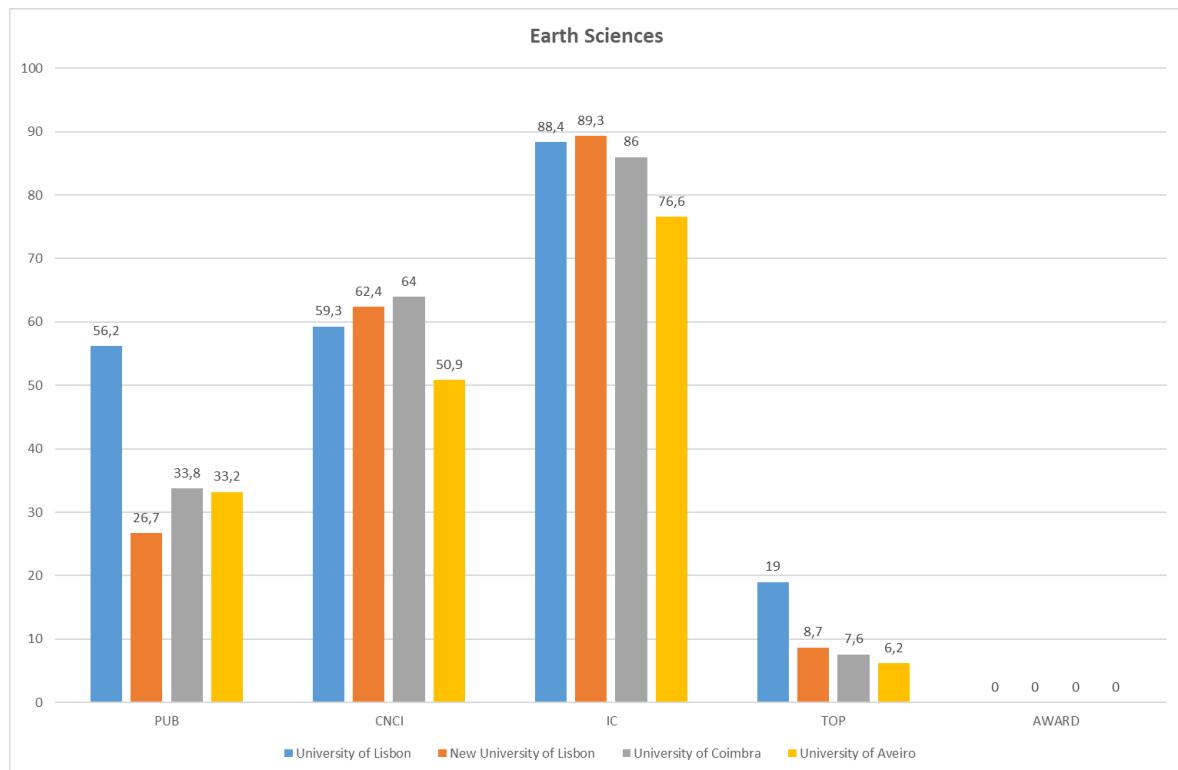
World Rank 2018	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
201-300	201-300	66-117	6-15	1-2	University of Aveiro		47,4	63,6	77,9	14,7	0
201-300	201-300	66-117	6-15	1-2	University of Lisbon		55,9	61,8	77,7	20,1	0
301-400	301-400	118-167	16-21	3-4	New University of Lisbon		40,5	61,8	76,7	16,7	0
301-400	201-300	118-167	16-21	3-4	University of Porto		50,9	61,5	73,3	11,1	0
401-500	401-500	168-209	22-27	5-6	University of Coimbra		40,4	56,6	79,7	11,1	0
401-500	401-500	168-209	22-27	5-6	University of Minho		34	63,9	74,5	7,9	0
500	500	209	27	6	Nº IES						



### 3.1.4 Earth Sciences

World Rank 2018	World Rank 2017	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
151-200	151-200	68-95	4-8	1	University of Lisbon		56,2	59,3	88,4	19	0
301-400	n/c	136-175	11-20	2-3	New University of Lisbon		26,7	62,4	89,3	8,7	0
301-400	n/c	136-175	11-20	2-3	University of Coimbra		33,8	64	86	7,6	0
401-500	n/c	176-223	21-33	4	University of Aveiro		33,2	50,9	76,6	6,2	0
500	300	223	23	4	Nº IES						

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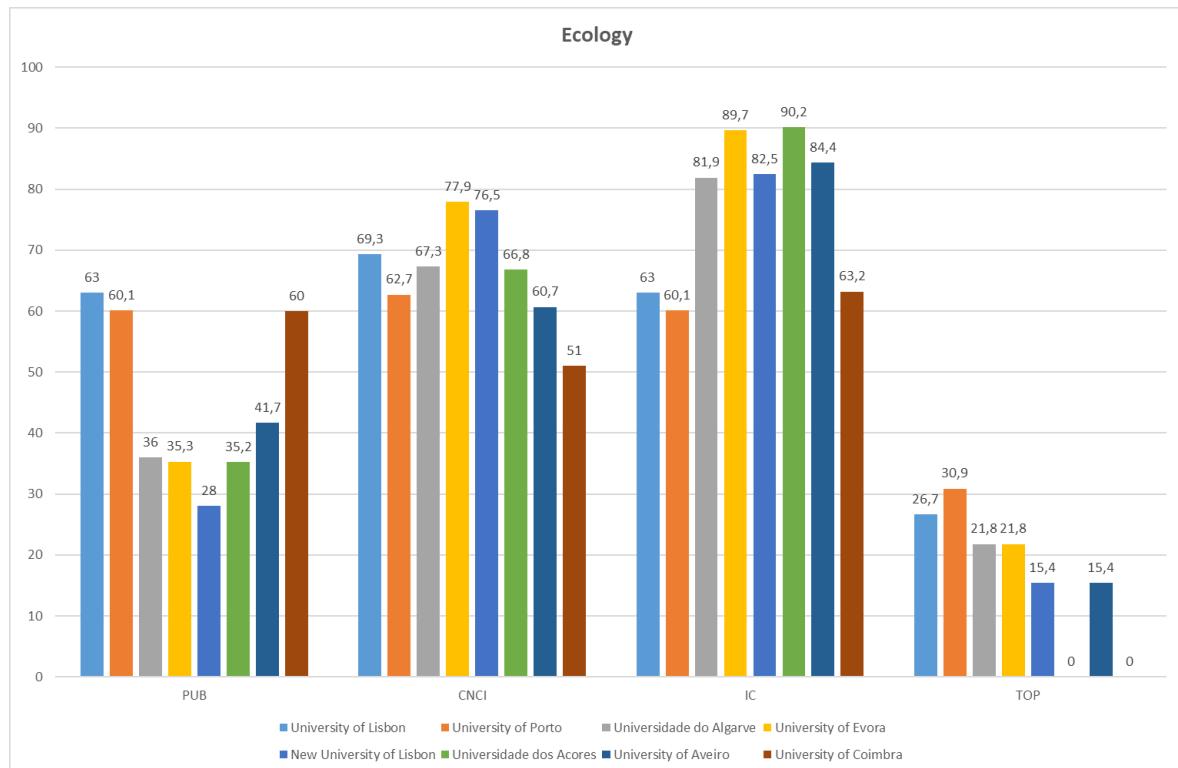
### 3.1.5 Geography

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
76-100	101-150	42-54	1-3	1	University of Lisbon		51,1	70,4	85,4	45,6
200	200	101	8	1	Nº IES					

### 3.1.6 Ecology

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
101-150	101-150	49-72	3-6	1-2	University of Lisbon		63	69,3	63	26,7
101-150	101-150	49-72	3-6	1-2	University of Porto		60,1	62,7	60,1	30,9
201-300	n/c	96-137	11-22	3-4	Universidade do Algarve		36	67,3	81,9	21,8
201-300	151-200	96-137	11-22	3-4	University of Evora		35,3	77,9	89,7	21,8
301-400	n/c	138-186	22-47	5-8	New University of Lisbon		28	76,5	82,5	15,4
301-400	201-300	138-186	22-47	5-8	Universidade dos Acores		35,2	66,8	90,2	0
301-400	n/c	138-186	22-47	5-8	University of Aveiro		41,7	60,7	84,4	15,4
301-400	201-300	138-186	22-47	5-8	University of Coimbra		60	51	63,2	0
400	300	186	47	8	Nº IES					

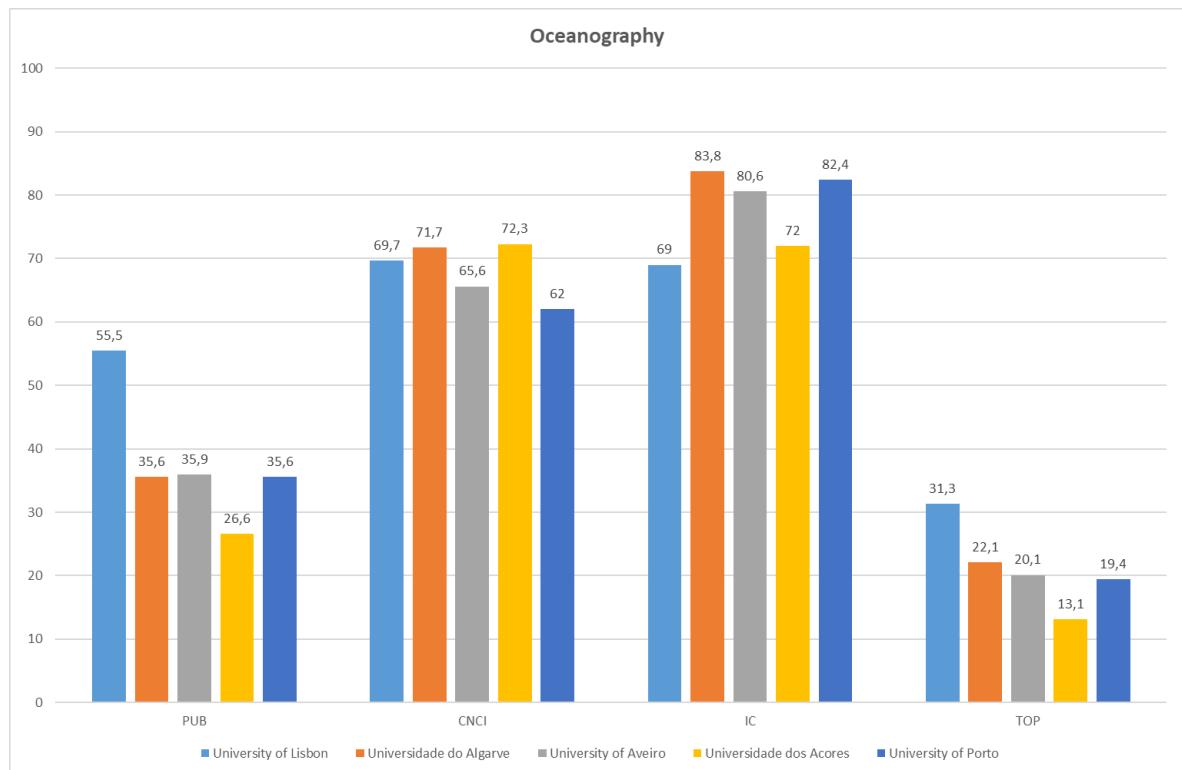
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### 3.1.7 Oceanography

Área nova 2018

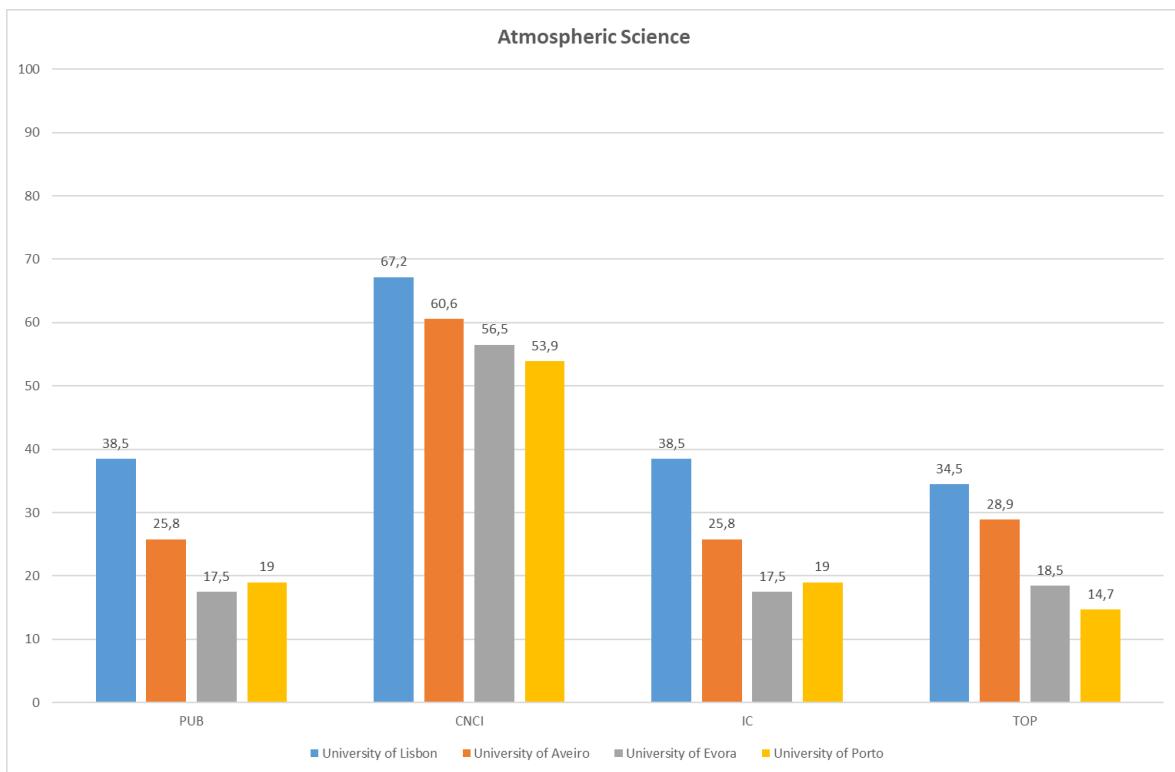
World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	17-28	1	1	University of Lisbon		55,5	69,7	69	31,3
101-150	42-65	5-10	2-3	Universidade do Algarve		35,6	71,7	83,8	22,1
101-150	42-65	5-10	2-3	University of Aveiro		35,9	65,6	80,6	20,1
151-200	66-82	11-20	4-5	Universidade dos Acores		26,6	72,3	72	13,1
151-200	66-82	11-20	4-5	University of Porto		35,6	62	82,4	19,4
200	82	20	5	Nº IES					



### 3.1.8 Atmospheric Science

Área nova 2018

World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
76-100	32-42	1-2	1	University of Lisbon		38,5	67,2	38,5	34,5
201-300	93-137	9-16	2	University of Aveiro		25,8	60,6	25,8	28,9
301-400	138-164	17-23	3-4	University of Evora		17,5	56,5	17,5	18,5
301-400	138-164	17-23	3-4	University of Porto		19	53,9	19	14,7
400	164	23	4	Nº IES		38,5	67,2	38,5	34,5

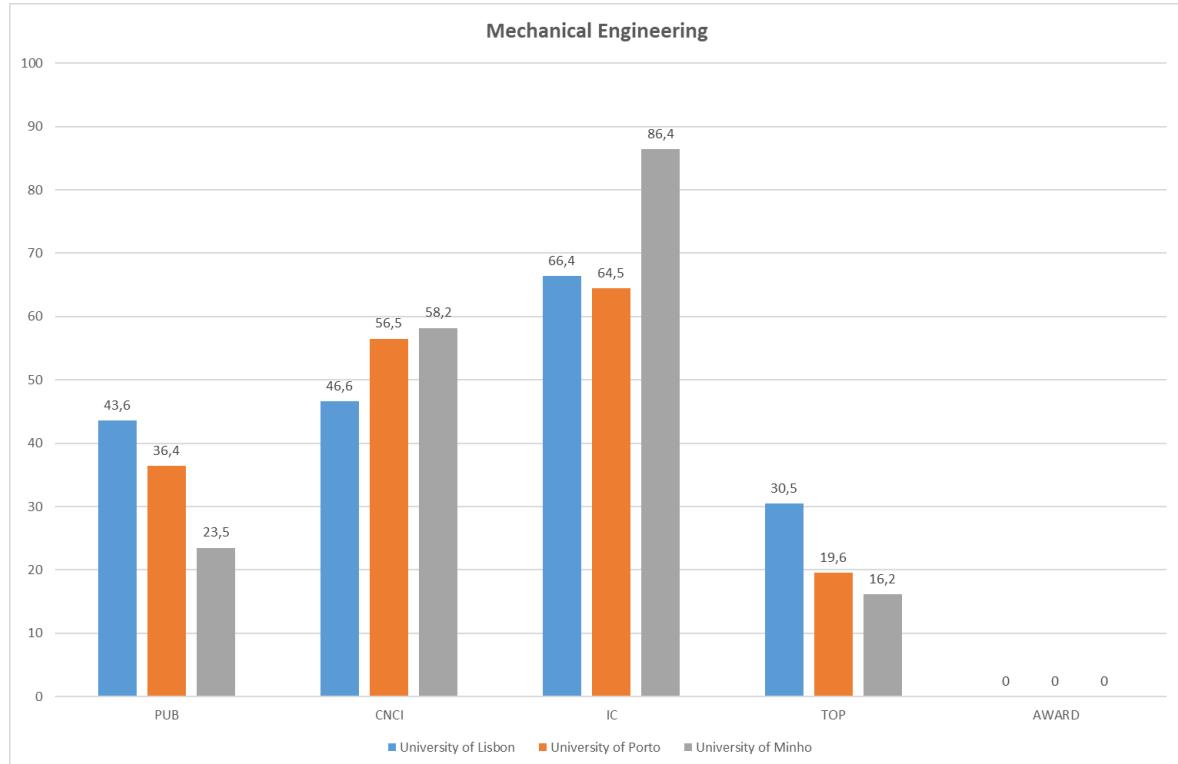


## 3.2 ENGINEERING

### 3.2.1 Mechanical Engineering

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
101-150	101-150	29-45	1-3	1	University of Lisbon		43,6	46,6	66,4	30,5	0
151-200	151-200	46-59	4-7	2	University of Porto		36,4	56,5	64,5	19,6	0
201-300	201-300	60-96	8-13	3	University of Minho		23,5	23,5	86,4	16,2	0
n/c	201-300				University of Aveiro						
300	300	96	13	3	Nº IES						

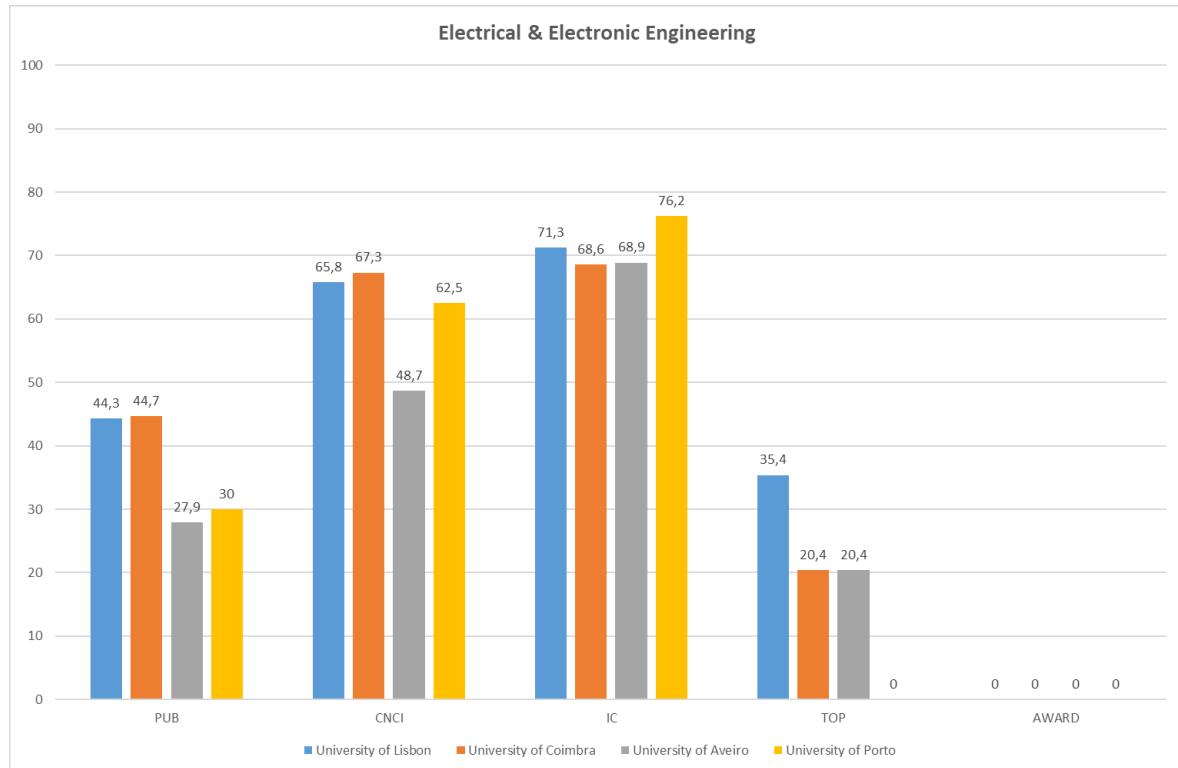
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### 3.2.2 Electrical & Electronic Engineering

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
51-75	76-100	14-23	2	1	University of Lisbon		44,3	65,8	71,3	35,4	0
101-150	151-200	33-49	4-6	2	University of Coimbra		44,7	67,3	68,6	20,4	0
301-400	301-400	94-129	15-27	3-4	University of Aveiro		27,9	48,7	68,9	20,4	0
301-400	201-300	94-129	15-27	3-4	University of Porto		30	62,5	76,2	0	0
n/c	301-400				University of Beira Interior						
500	500	152	36	4	Nº IES						

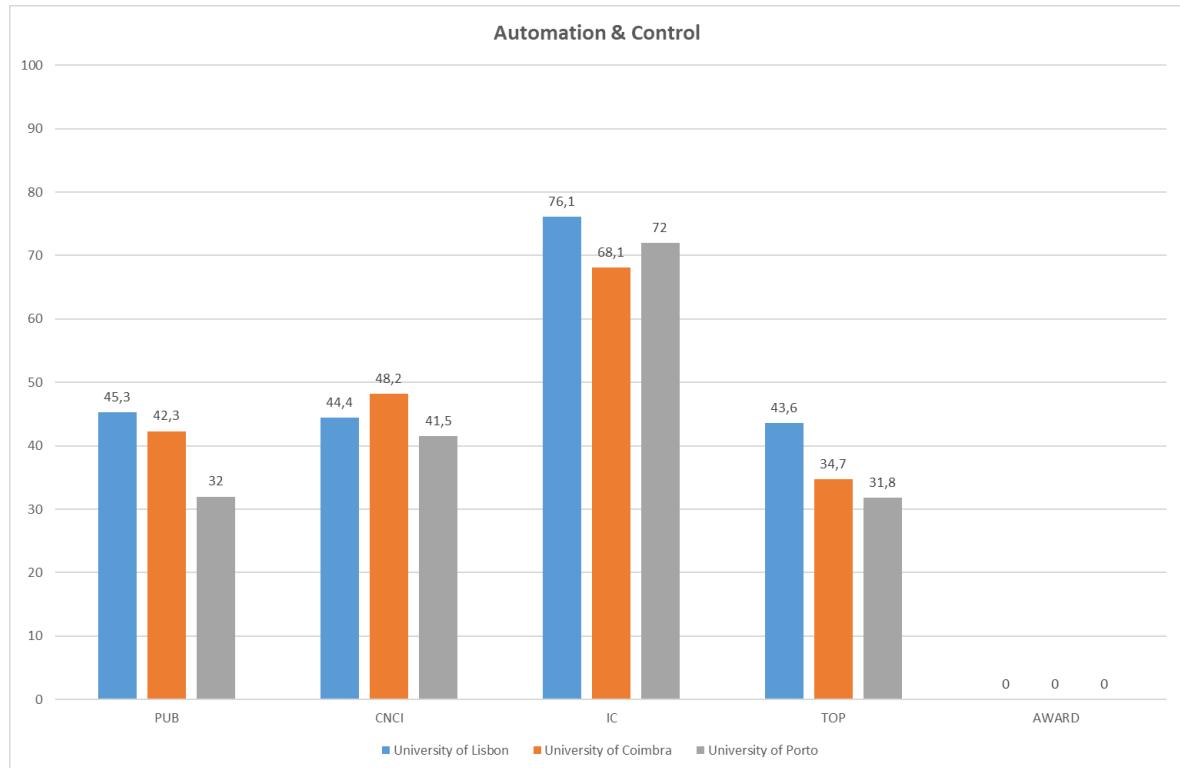
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### 3.2.3 Automation & Control

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
76-100	76-100	23-33	1-5	1	University of Lisbon		45,3	44,4	76,1	43,6	0
101-150	76-100	34-45	6-9	2-3	University of Coimbra		42,3	48,2	68,1	34,7	0
101-150	n/c	34-45	6-9	2-3	University of Porto		32	41,5	72	31,8	0
200	100	53	14	3	Nº IES						

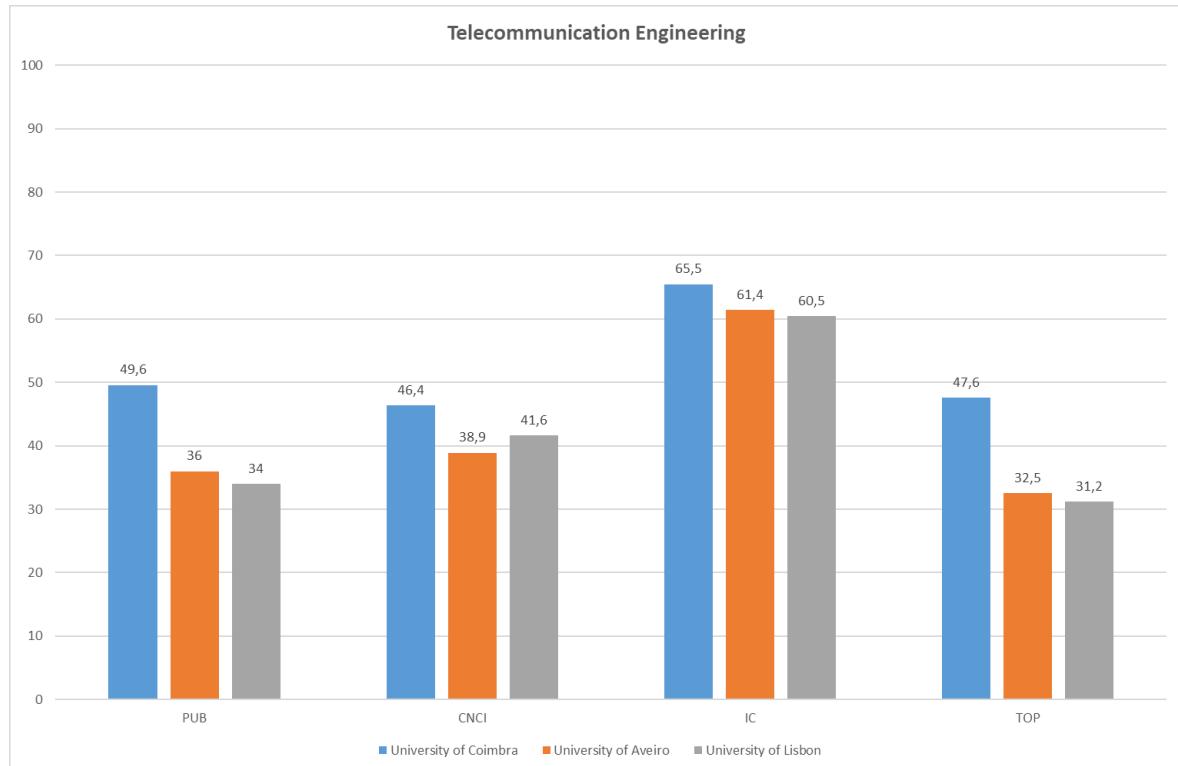
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### 3.2.4 Telecommunication Engineering

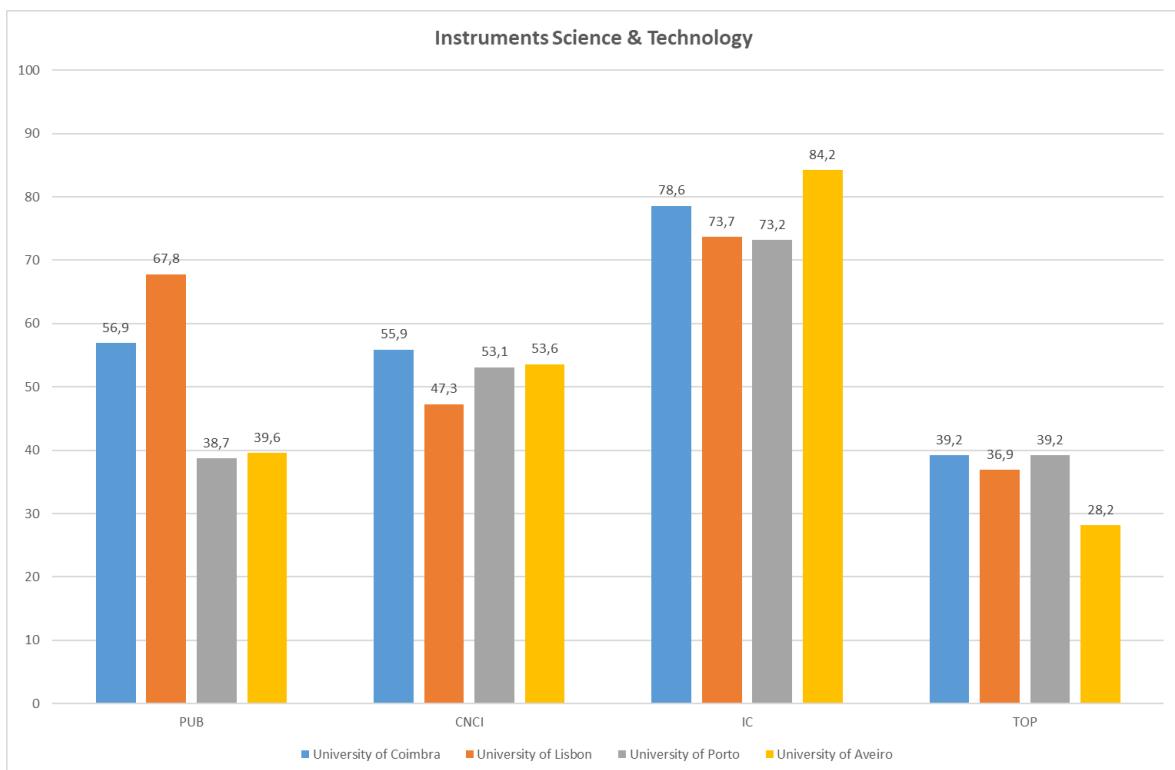
World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	n/c	14-21	2	1	University of Coimbra		49,6	46,4	65,5	47,6
151-200	151-200	44-58	5-7	2-3	University of Aveiro		36	38,9	61,4	32,5
151-200	151-200	44-58	5-7	2-3	University of Lisbon		34	41,6	60,5	31,2
200	200	58	7	3	Nº IES					

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### 3.2.5 Instruments Science & Technology

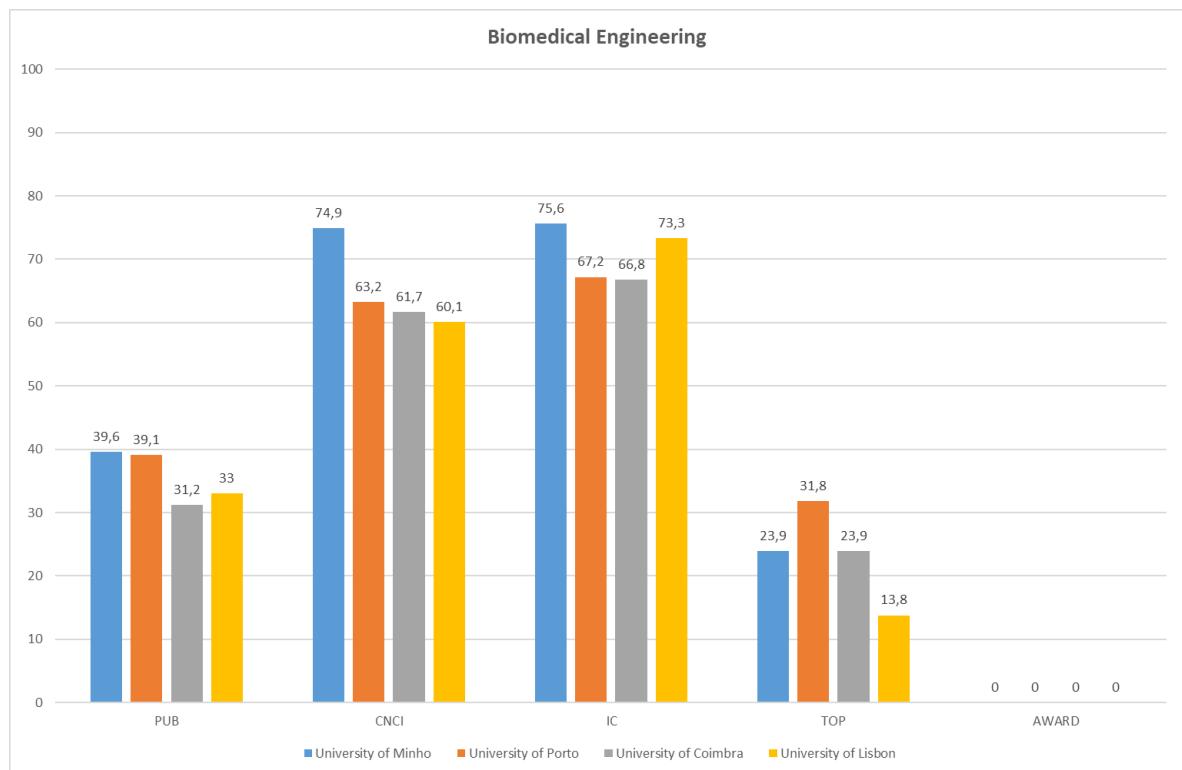
World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	101-150	13-25	3-6	1-2	University of Coimbra		56,9	55,9	78,6	39,2
51-75	51-75	13-25	3-6	1-2	University of Lisbon		67,8	47,3	73,7	36,9
151-200	151-200	53-74	11-17	3	University of Porto		38,7	53,1	73,2	39,2
201-300	201-300	75-127	18-26	4	University of Aveiro		39,6	53,6	84,2	28,2
300	300	127	26	4	Nº IES					



### 3.2.6 Biomedical Engineering

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
101-150	76-100	27-47	1-3	1-2	University of Minho		39,6	74,9	75,6	23,9	0
101-150	151-200	27-47	1-3	1-2	University of Porto		39,1	63,2	67,2	31,8	0
201-300	n/c	70-111	7-12	3-4	University of Coimbra		31,2	61,7	66,8	23,9	0
201-300	201-300	70-111	7-12	3-4	University of Lisbon		33	60,1	73,3	13,8	0
300	300	111	12	4	Nº IES						

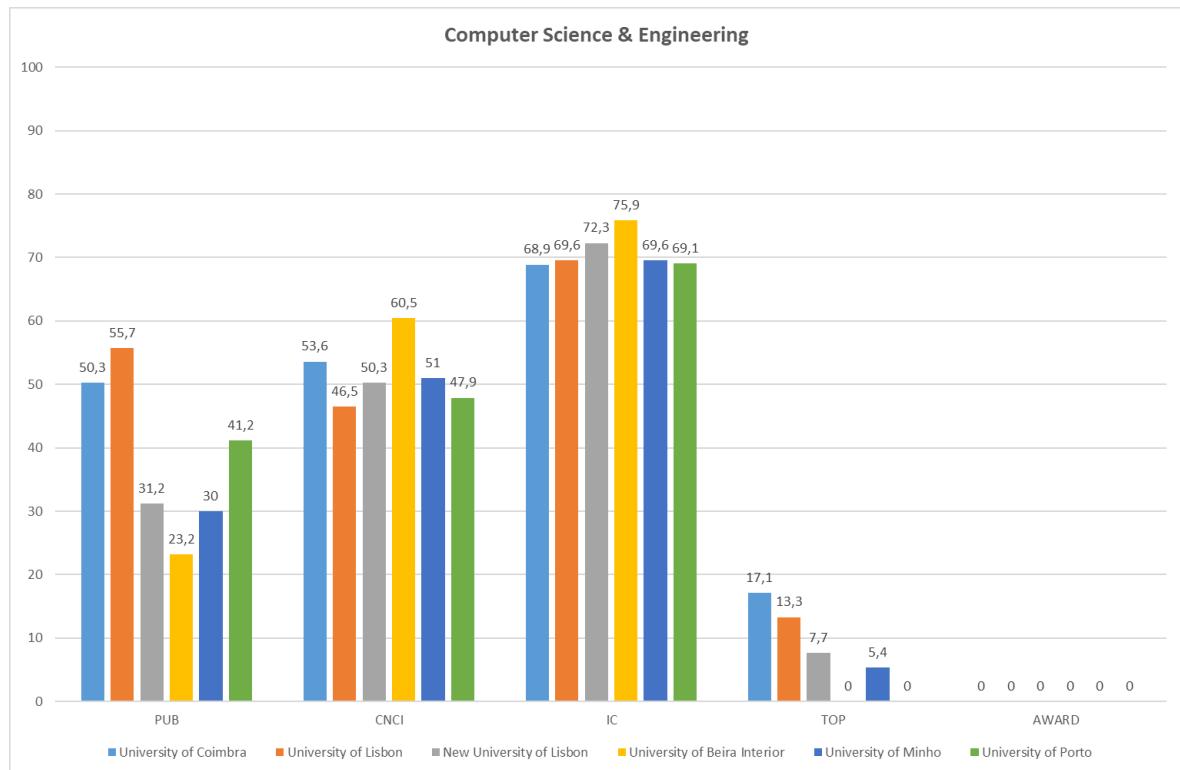
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### 3.2.7 Computer Science & Engineering

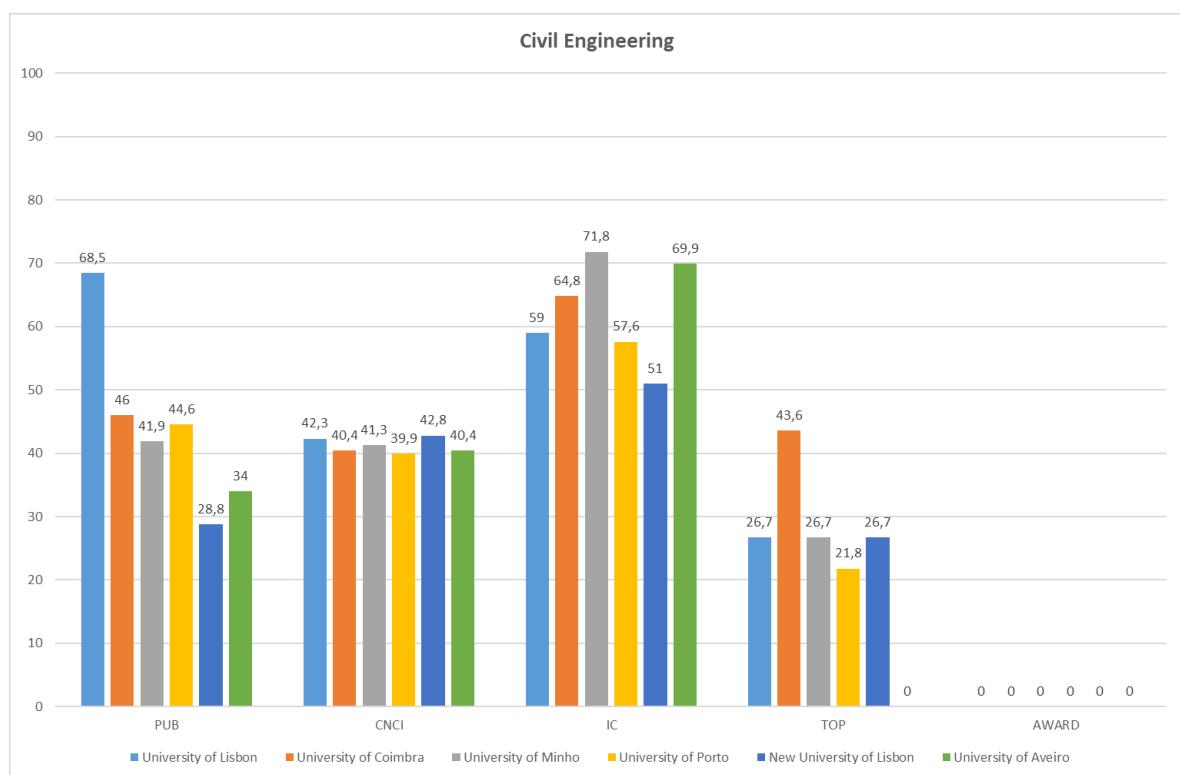
World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
101-150	151-200	24-43	3	1	University of Coimbra		50,3	53,6	68,9	17,1	0
151-200	76-100	44-64	4-5	2	University of Lisbon		55,7	46,5	69,6	13,3	0
301-400	401-500	108-150	14-22	3	New University of Lisbon		31,2	50,3	72,3	7,7	0
401-500	n/c	151-198	23-32	4-6	University of Beira Interior		23,2	60,5	75,9	0	0
401-500	301-400	151-198	23-32	4-6	University of Minho		30	51	69,6	5,4	0
401-500	101-150	151-198	23-32	4-6	University of Porto		41,2	47,9	69,1	0	0
n/c	401-500				University of Aveiro						
500	500	198	32	6	Nº IES						

n/c - não consta



### 3.2.8 Civil Engineering

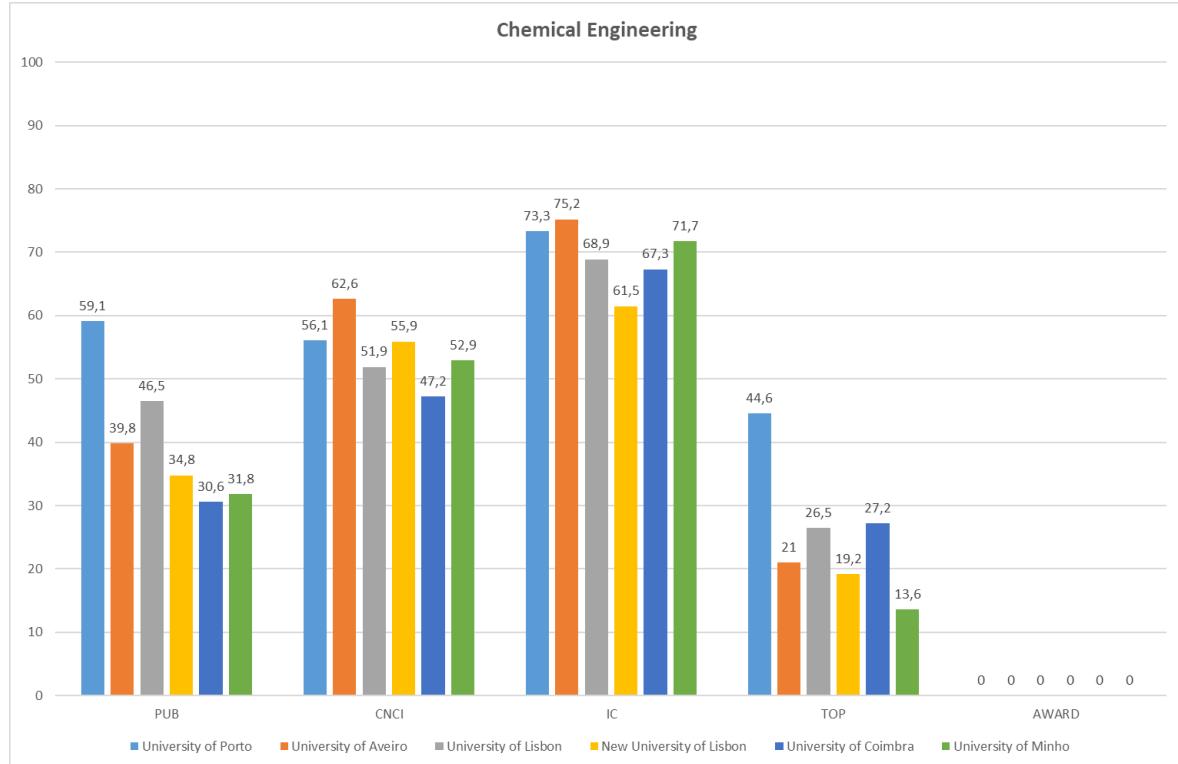
World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
45	43	8	2	1	University of Lisbon	149,4	68,5	42,3	59	26,7	0
51-75	51-75	10-15	3-4	2	University of Coimbra		46	40,4	64,8	43,6	0
76-100	76-100	16-21	5	3	University of Minho		41,9	41,3	71,8	26,7	0
101-150	201-300	22-38	6-8	4	University of Porto		44,6	39,9	57,6	21,8	0
151-200	151-200	39-58	9-11	5	New University of Lisbon		28,8	42,8	51	26,7	0
201-300	201-300	59-92	12-18	6	University of Aveiro		34	40,4	69,9	0	0
300	300	92	18	6	Nº IES						



### 3.2.9 Chemical Engineering

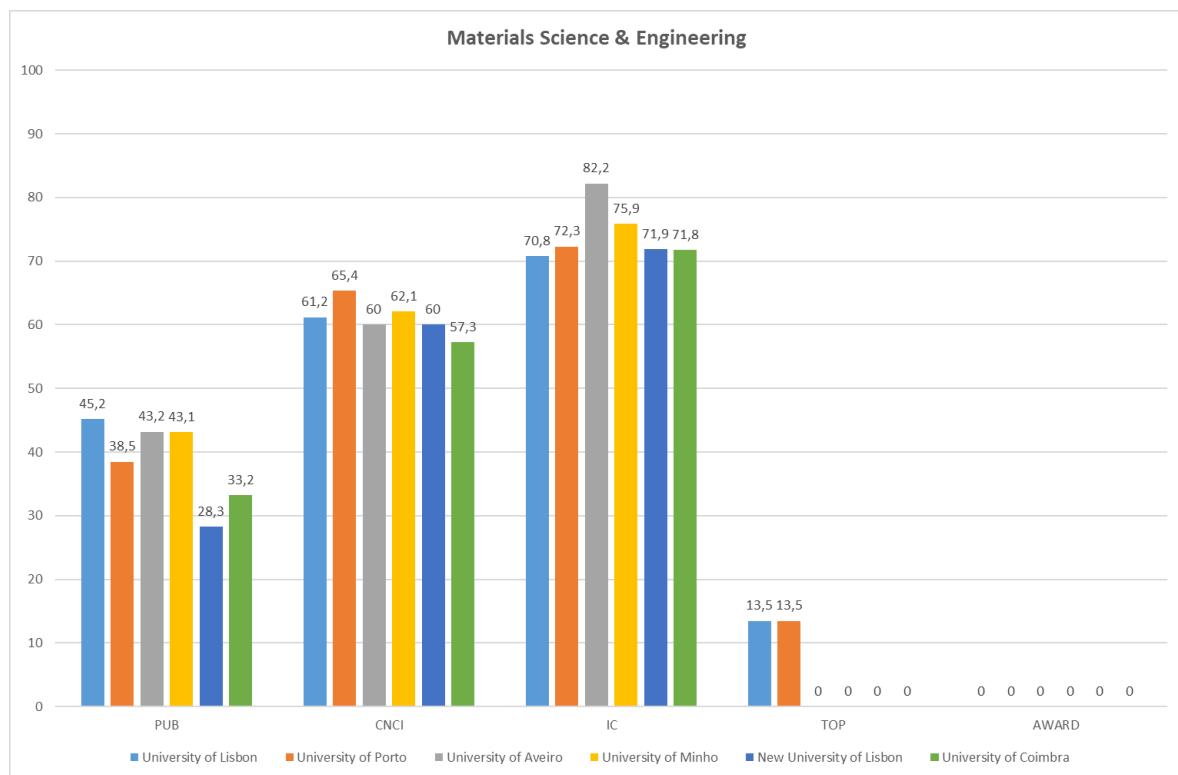
World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
41	29	7	1	1	University of Porto	174,6	59,1	56,1	73,3	44,6	0
101-150	101-150	19-36	3-7	2-3	University of Aveiro		39,8	62,6	75,2	21	0
101-150	101-150	19-36	3-7	2-3	University of Lisbon		46,5	51,9	68,9	26,5	0
201-300	201-300	47-87	11-28	4-5	New University of Lisbon		34,8	55,9	61,5	19,2	0
201-300	n/c	47-87	11-28	4-5	University of Coimbra		30,6	47,2	67,3	27,2	0
301-400	201-300	88-121	29-43	6	University of Minho		31,8	52,9	71,7	13,6	0
500	300	157	51	6	Nº IES						

n/c - não consta



### 3.2.10 Materials Science & Engineering

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
201-300	201-300	67-112	4-9	1-2	University of Lisbon		45,2	61,2	70,8	13,5	0
201-300	201-300	67-112	4-9	1-2	University of Porto		38,5	65,4	72,3	13,5	0
301-400	201-300	113-160	10-17	3-4	University of Aveiro		43,2	60	82,2	0	0
301-400	301-400	113-160	10-17	3-4	University of Minho		43,1	62,1	75,9	0	0
401-500	401-500	161-193	18-23	5-6	New University of Lisbon		28,3	60	71,9	0	0
401-500	401-500	161-193	18-23	5-6	University of Coimbra		33,2	57,3	71,8	0	0
500	500	193	23	6	Nº IES						

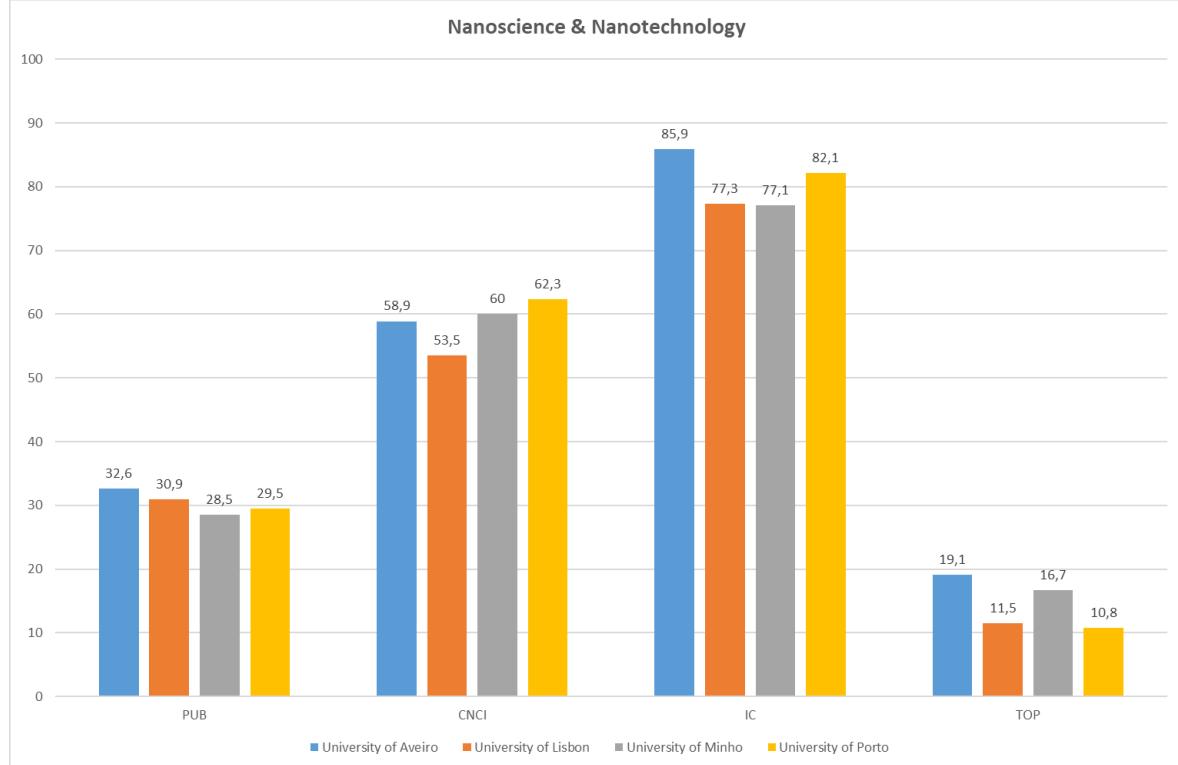


### 3.2.11 Nanoscience & Nanotechnology

Em 2017, não havia nenhuma IES portuguesa entre as 300 listadas.

World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	49-95	5-8	1	University of Aveiro		32.6	58.9	85.9	19.1
301-400	96-119	9-18	2-4	University of Lisbon		30.9	53.5	77.3	11.5
301-400	96-119	9-18	2-4	University of Minho		28.5	60	77.1	16.7
301-400	96-119	9-18	2-4	University of Porto		29.5	62.3	82.1	10.8
400	119	18	4	Nº IES					

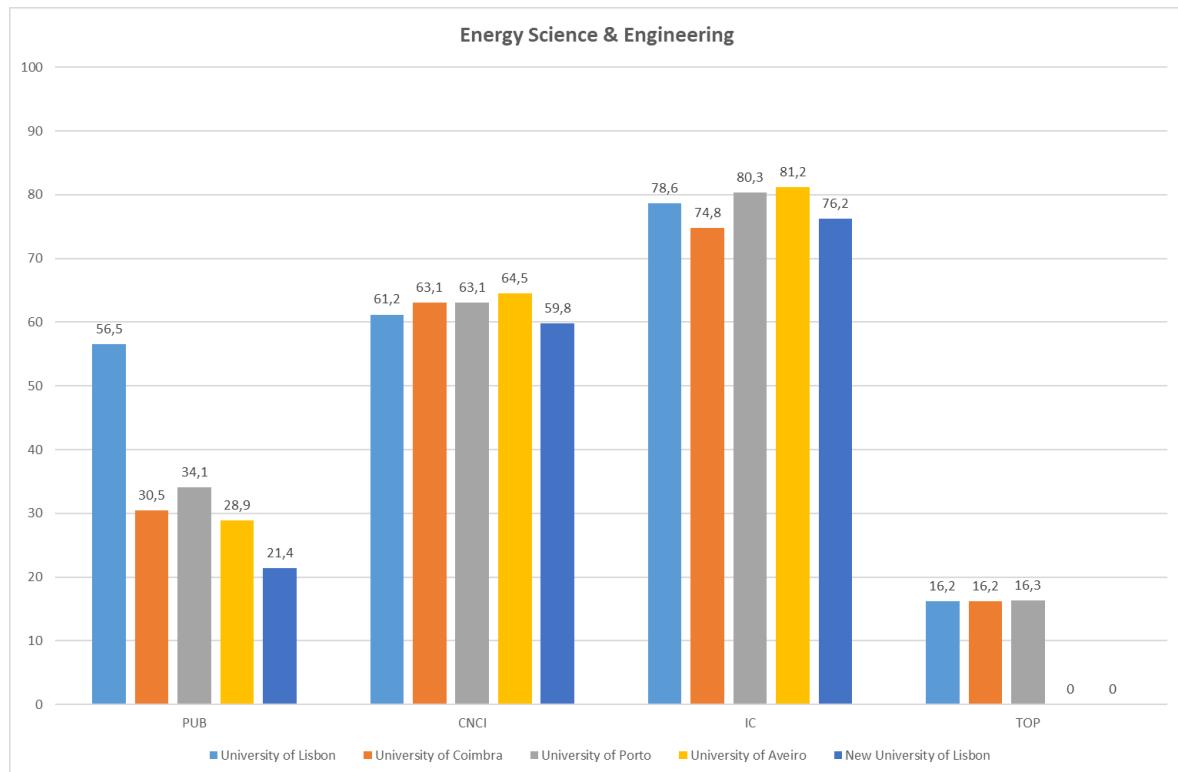
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### 3.2.12 Energy Science & Engineering

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
101-150	151-200	22-36	1	1	University of Lisbon		56,5	61,2	78,6	16,2
201-300	n/c	61-99	6-14	2-3	University of Coimbra		30,5	63,1	74,8	16,2
201-300	201-300	61-99	6-14	2-3	University of Porto		34,1	63,1	80,3	16,3
301-400	201-300	100-147	15-21	4	University of Aveiro		28,9	64,5	81,2	0
401-500	n/c	148-182	22-39	5	New University of Lisbon		21,4	59,8	76,2	0
500	300	182	39	5	Nº IES					

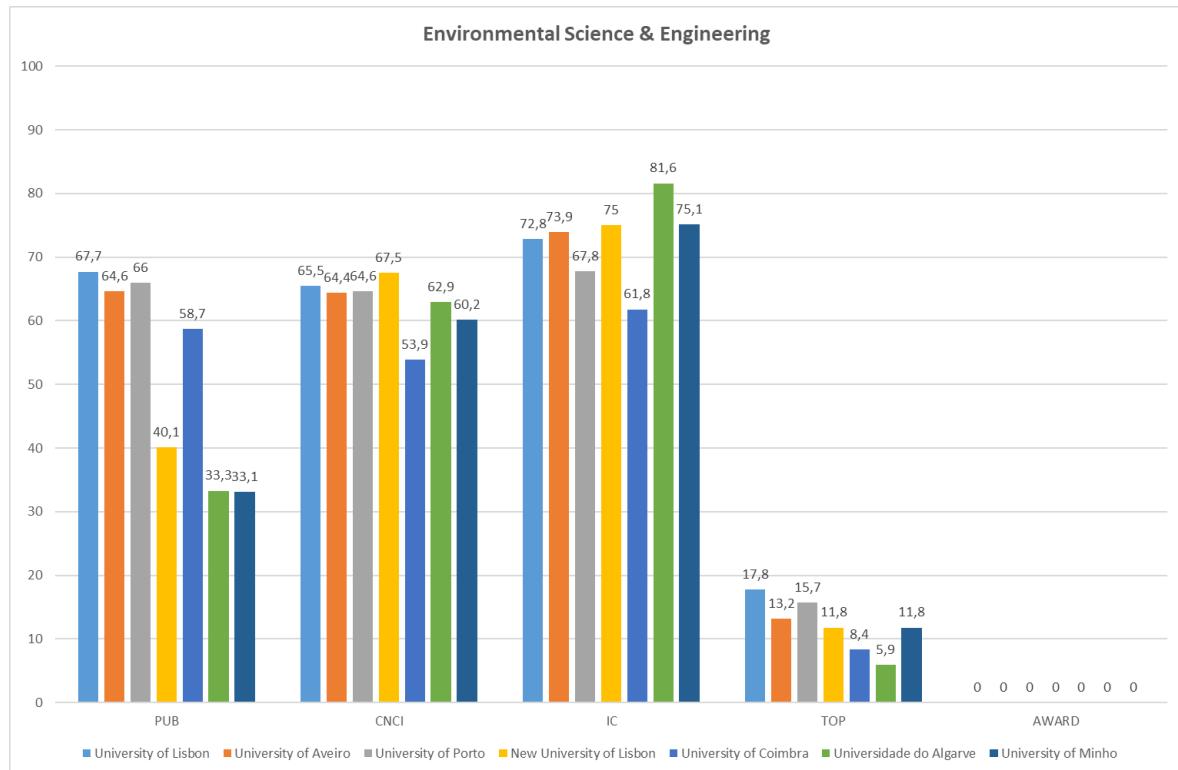
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### 3.2.13 Environmental Science & Engineering

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
101-150	101-150	29-48	1-6	1	University of Lisbon		67,7	65,5	72,8	17,8	0
151-200	151-200	49-70	7-8	2-3	University of Aveiro		64,6	64,4	73,9	13,2	0
151-200	151-200	49-70	7-8	2-3	University of Porto		66	64,6	67,8	15,7	0
301-400	301-400	116-160	15-26	4-5	New University of Lisbon		40,1	67,5	75	11,8	0
301-400	301-400	116-160	15-26	4-5	University of Coimbra		58,7	53,9	61,8	8,4	0
401-500	n/c	161-198	27-47	6-7	Universidade do Algarve		33,3	62,9	81,6	5,9	0
401-500	n/c	161-198	27-47	6-7	University of Minho		33,1	60,2	75,1	11,8	0
500	500	198	47	7	Nº IES						

n/c - não consta



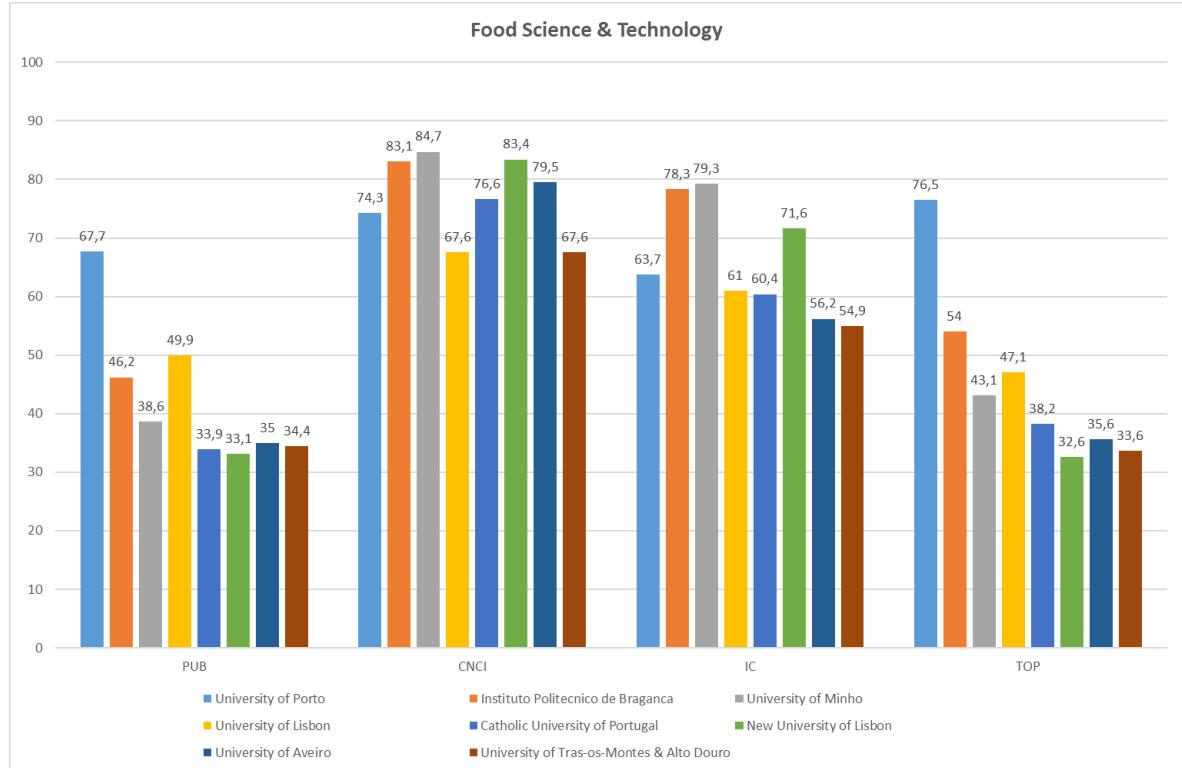
### 3.2.14 Water Resources

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
51-75	18	17-25	1-2	1	University of Lisbon		71,8	75,7	77	42,8	0
n/c	151-200				University of Porto						
200	200	74	9	1	Nº IES						

### 3.2.15 Food Science & Technology

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
12	11	3	3	1	University of Porto	231,3	67,7	74,3	63,7	76,5
33	50	14	6	2	Instituto Politecnico de Braganca	199	46,2	83,1	78,3	54
51-75	76-100	22-33	10-17	3	University of Minho		38,6	84,7	79,3	43,1
76-100	51-75	34-42	18-20	4	University of Lisbon		49,9	67,6	61	47,1
101-150	101-150	43-69	21-32	5-7	Catholic University of Portugal		33,9	76,6	60,4	38,2
101-150	101-150	43-69	21-32	5-7	New University of Lisbon		33,1	83,4	71,6	32,6
101-150	101-150	43-69	21-32	5-7	University of Aveiro		35	79,5	56,2	35,6
201-300	201-300	90-112	46-61	8	University of Tras-os-Montes & Alto Douro		34,4	67,6	54,9	33,6
n/c	201-300				University of Coimbra					
300	300	112	61	8	Nº IES					

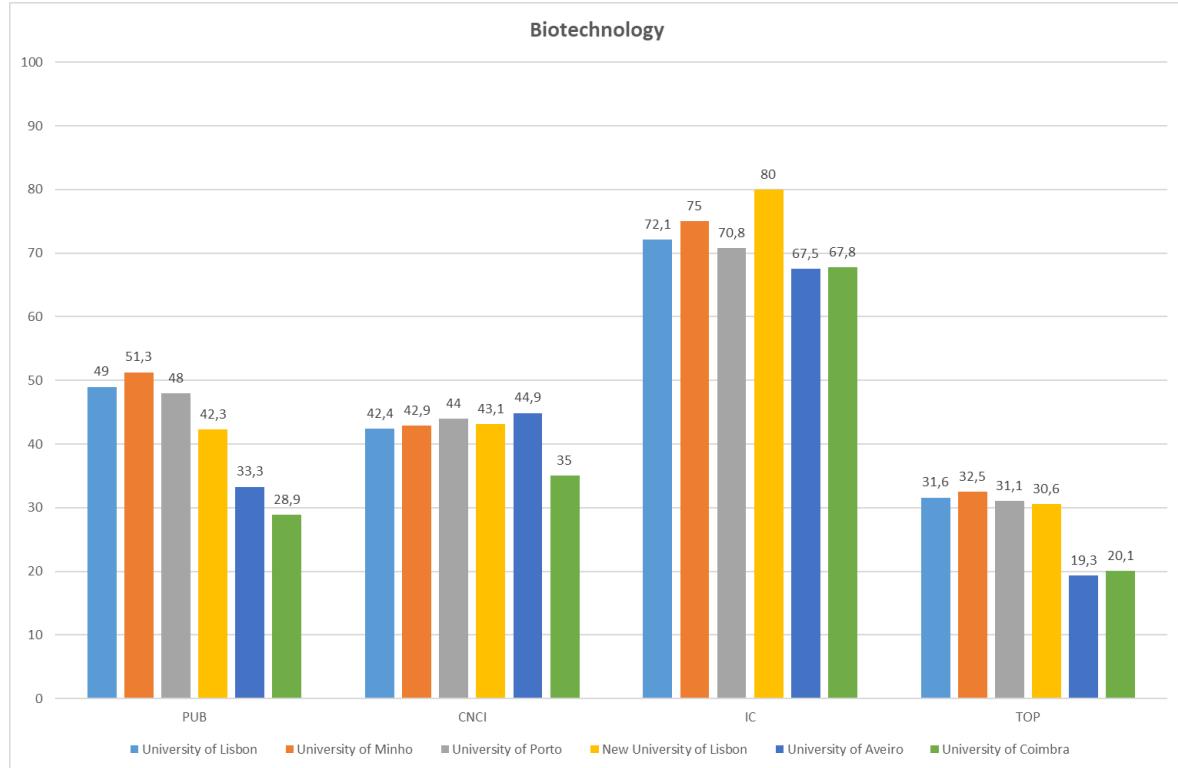
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### 3.2.16 Biotechnology

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
151-200	201-300	48-69	5-8	1-3	University of Lisbon		49	42,4	72,1	31,6
151-200	151-200	48-69	5-8	1-3	University of Minho		51,3	42,9	75	32,5
151-200	201-300	48-69	5-8	1-3	University of Porto		48	44	70,8	31,1
201-300	151-200	70-115	9-14	4	New University of Lisbon		42,3	43,1	80	30,6
301-400	n/c	116-153	15-26	5	University of Aveiro		33,3	44,9	67,5	19,3
401-500	n/c	154-179	27-40	6	University of Coimbra		28,9	35	67,8	20,1
500	300	179	40	6	Nº IES					

n/c - não consta



### 3.2.17 Aerospace Engineering

Como em 2017, não há nenhuma IES portuguesa entre as 50 listadas.

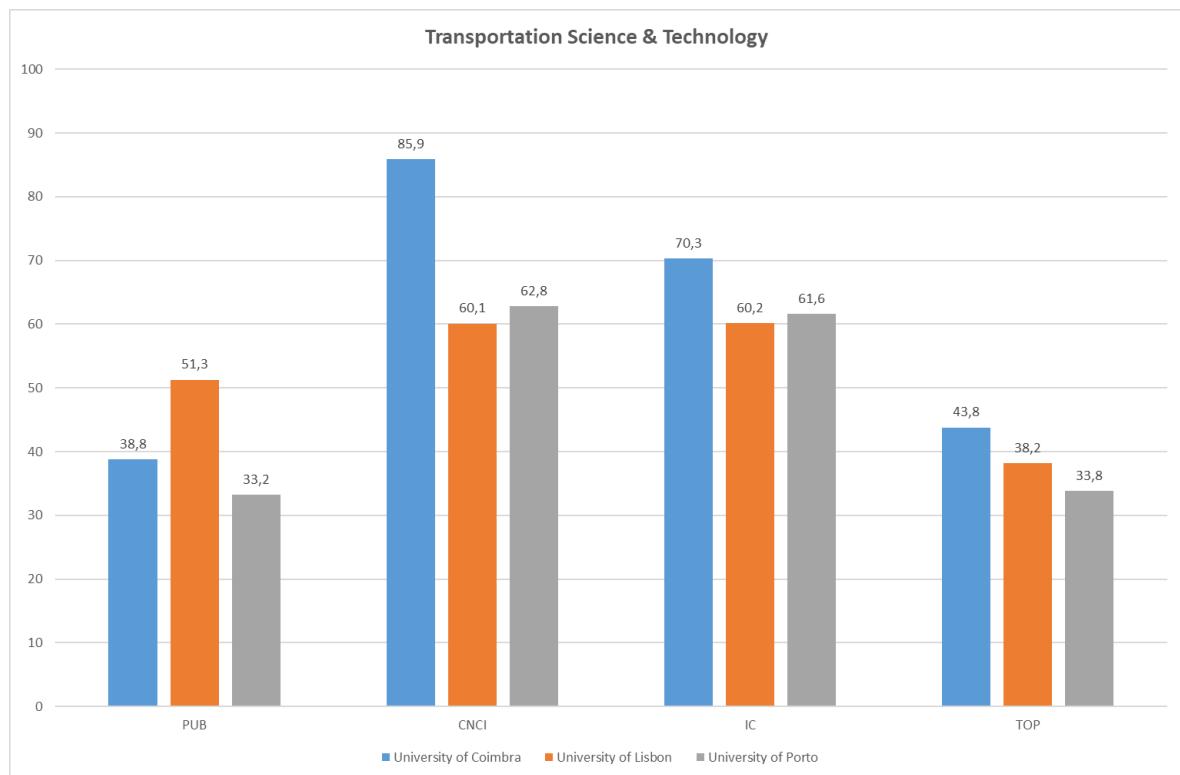
### 3.2.18 Marine/Ocean Engineering

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
4	3	2	1	1	University of Lisbon	240,6	77,3	67,2	59,6	84,2
50	50	15	3	1	Nº IES					

### 3.2.19 Transportation Science & Technology

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	76-100	9-17	1	1	University of Coimbra		38,8	85,9	70,3	43,8
101-150	76-100	28-43	4-8	2	University of Lisbon		51,3	60,1	60,2	38,2
151-200	n/c	44-59	9-11	3	University of Porto		33,2	62,8	61,6	33,8
200	100	59	11	3	Nº IES					

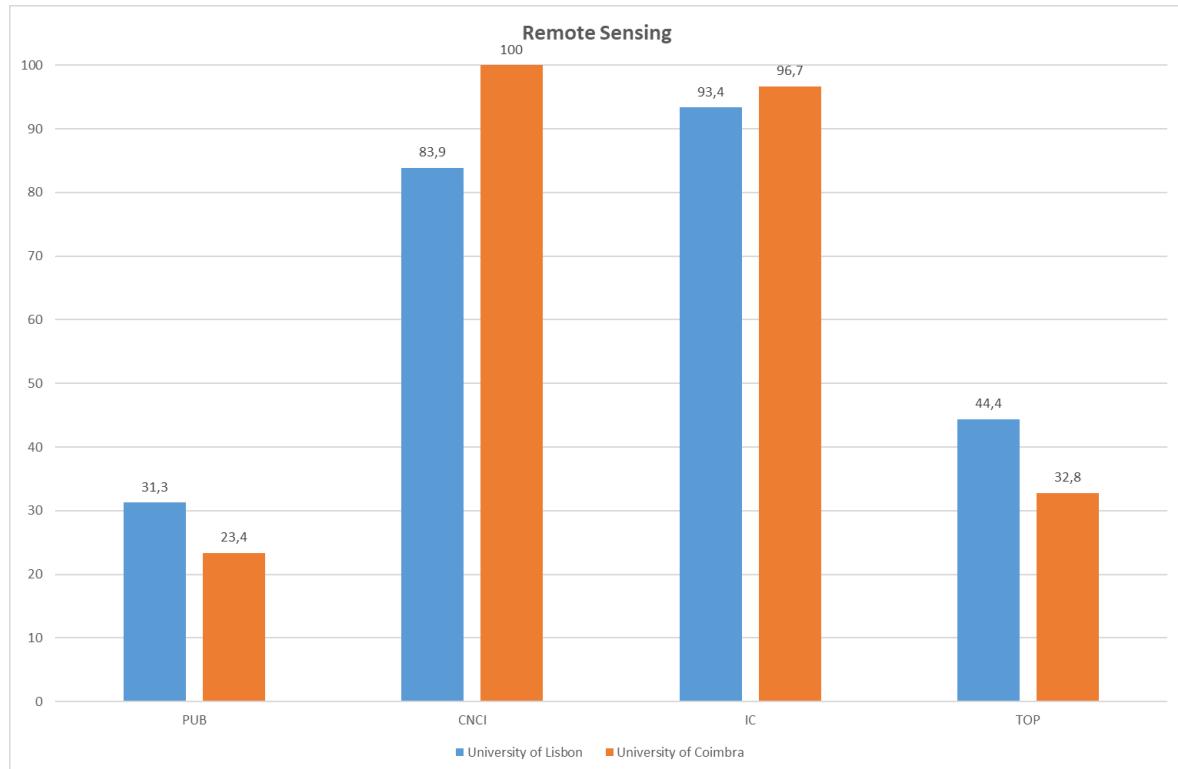
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### 3.2.20 Remote Sensing

World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
10	8	4	1	1	University of Lisbon	178,3	31,3	83,9	93,4	44,4
11	n/c	5	2	2	University of Coimbra	175,5	23,4	100	96,7	32,8
100	50	39	5	2	Nº IES					

n/c - não consta



### 3.2.21 Mining & Mineral Engineering

Como em 2017, não há nenhuma IES portuguesa entre as 100 listadas (50 em 2017).

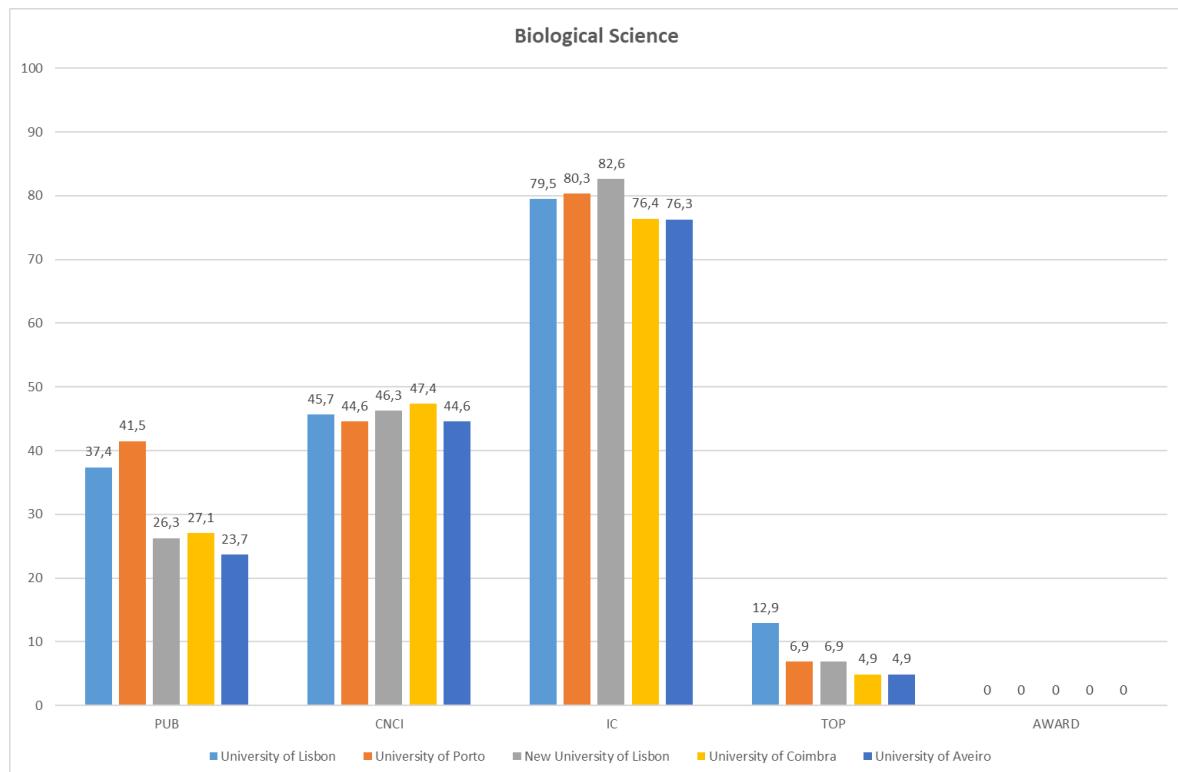
### 3.2.22 Metallurgical Engineering

Não há nenhuma IES portuguesa entre as 200 listadas. Em 2017, a U.Aveiro estava em 101-150 e Universidade de Lisboa em 151-200.

### 3.3 LIFE SCIENCES

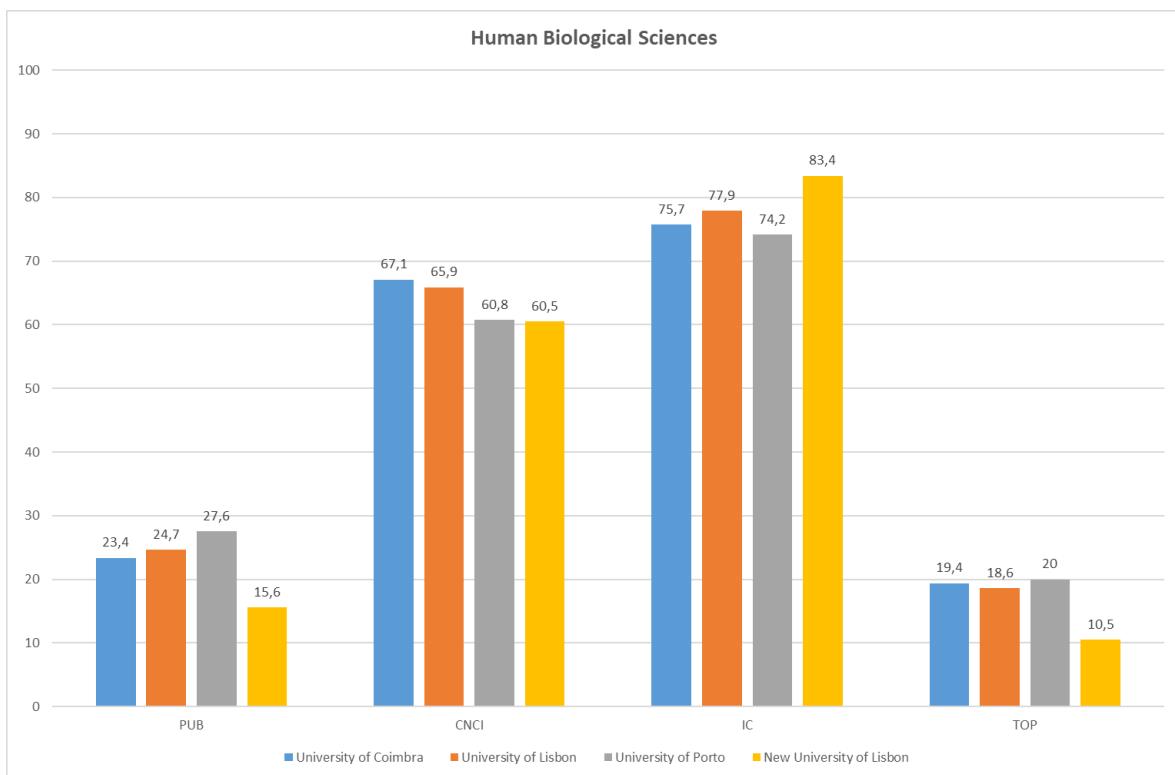
#### 3.3.1 Biological Science

World Rank 18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
151-200	201-300	70-95	4-5	1-2	University of Lisbon		37,4	45,7	79,5	12,9	0
151-200	201-300	70-95	4-5	1-2	University of Porto		41,5	44,6	80,3	6,9	0
301-400	301-400	137-186	10-22	3-4	New University of Lisbon		26,3	46,3	82,6	6,9	0
301-400	301-400	137-186	10-22	3-4	University of Coimbra		27,1	47,4	76,4	4,9	0
401-500	401-500	187-232	23-29	5	University of Aveiro		23,7	44,6	76,3	4,9	0
500	500	232	29	5	Nº IES						



### 3.3.2 Human Biological Sciences

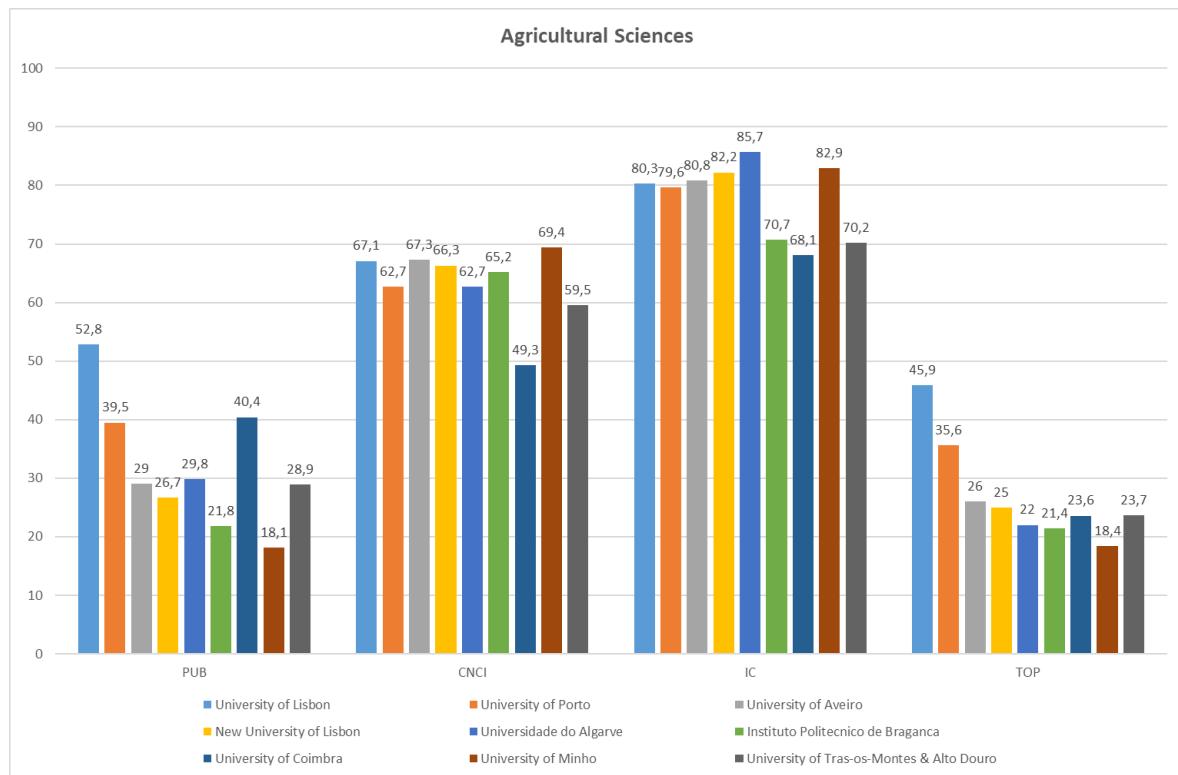
World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	201-300	96-138	4-11	1-3	University of Coimbra		23,4	67,1	75,7	19,4
201-300	201-300	96-138	4-11	1-3	University of Lisbon		24,7	65,9	77,9	18,6
201-300	201-300	96-138	4-11	1-3	University of Porto		27,6	60,8	74,2	20
401-500	401-500	181-221	20-31	4	New University of Lisbon		15,6	60,5	83,4	10,5
500	500	221	31	4	Nº IES					



### 3.3.3 Agricultural Sciences

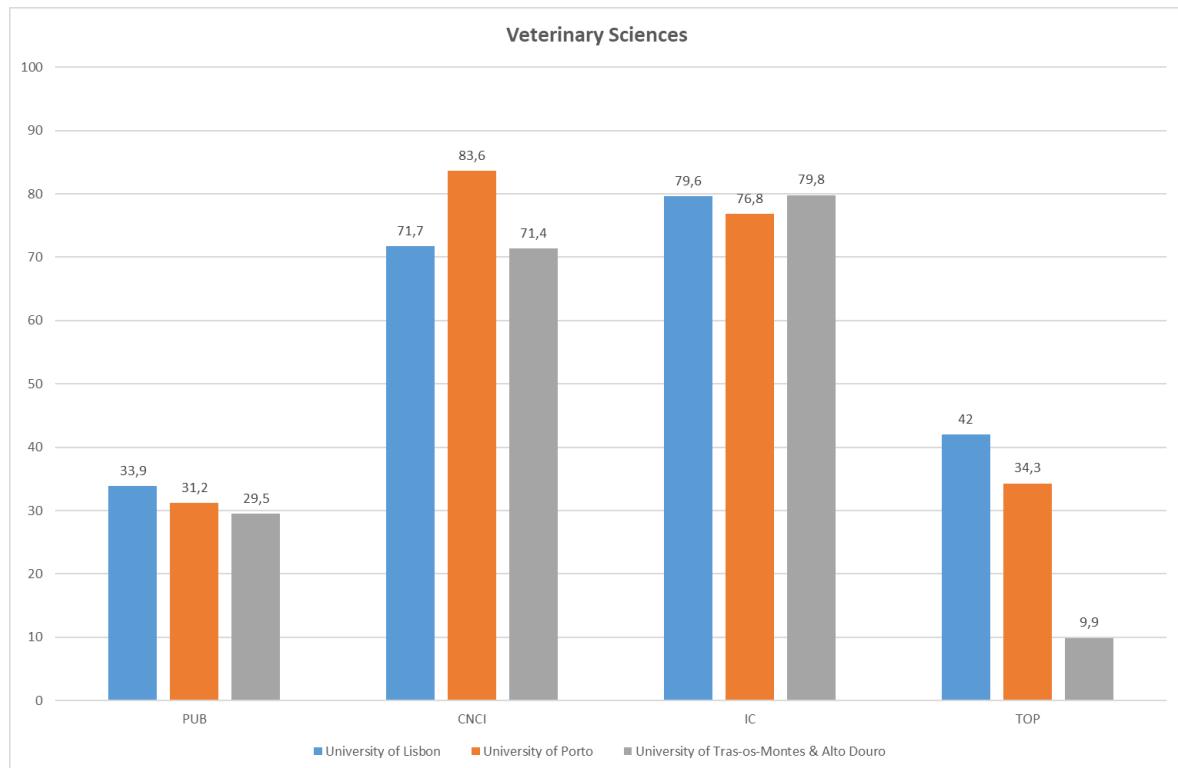
World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	51-75	14-28	3-8	1	University of Lisbon		52,8	67,1	80,3	45,9
151-200	151-200	68-94	15-17	2	University of Porto		39,5	62,7	79,6	35,6
201-300	301-400	95-147	18-29	3	University of Aveiro		29	67,3	80,8	26
301-400	301-400	148-188	30-45	4-5	New University of Lisbon		26,7	66,3	82,2	25
301-400	301-400	148-188	30-45	4-5	Universidade do Algarve		29,8	62,7	85,7	22
401-500	n/c	189-231	46-67	6-9	Instituto Politecnico de Braganca		21,8	65,2	70,7	21,4
401-500	301-400	189-231	46-67	6-9	University of Coimbra		40,4	49,3	68,1	23,6
401-500	n/c	189-231	46-67	6-9	University of Minho		18,1	69,4	82,9	18,4
401-500	401-500	189-231	46-67	6-9	University of Tras-os-Montes & Alto Douro		28,9	59,5	70,2	23,7
500	500	231	67	9	Nº IES					

n/c - não consta



### 3.3.4 Veterinary Sciences

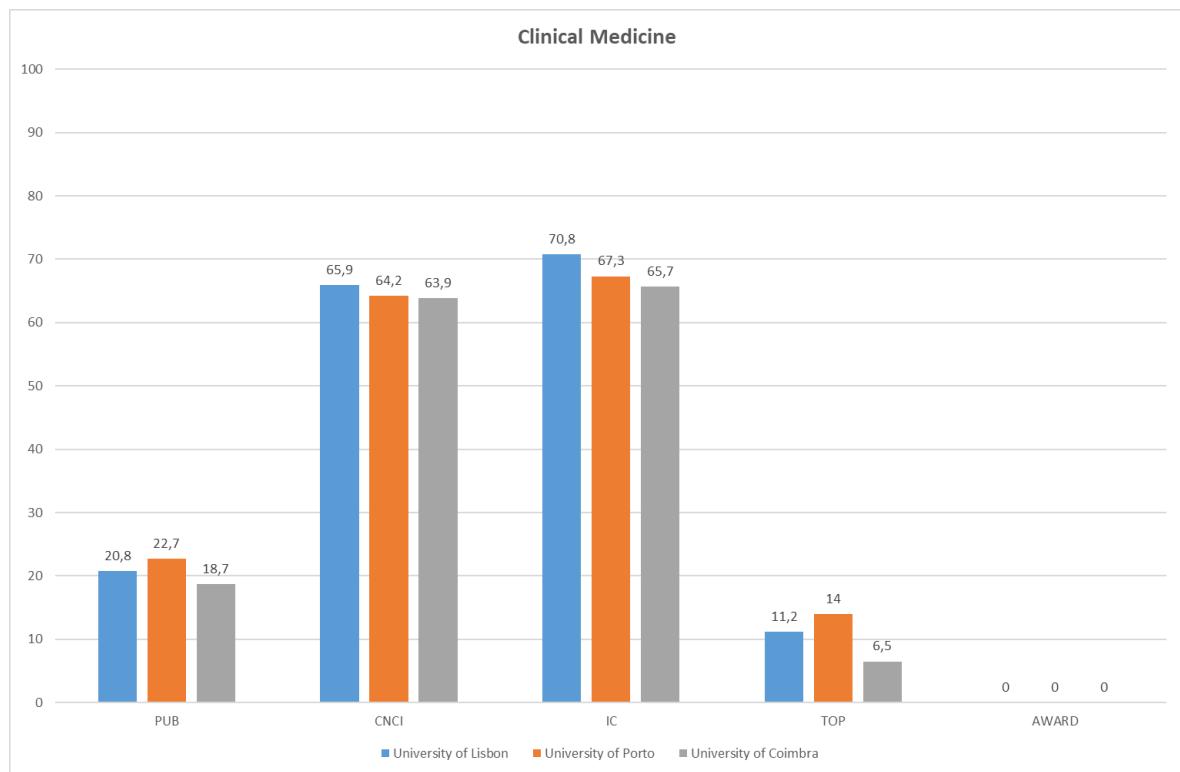
World Rank 18	World Rank 17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	101-150	27-37	6-9	1-2	University of Lisbon		33,9	71,7	79,6	42
51-75	51-75	27-37	6-9	1-2	University of Porto		31,2	83,6	76,8	34,3
151-200	101-150	74-86	22-29	3	University of Tras-os-Montes & Alto Douro		29,5	71,4	79,8	9,9
300	200	101	56	3	Nº IES					



## 3.4 MEDICAL SCIENCES

### 3.4.1 Clinical Medicine

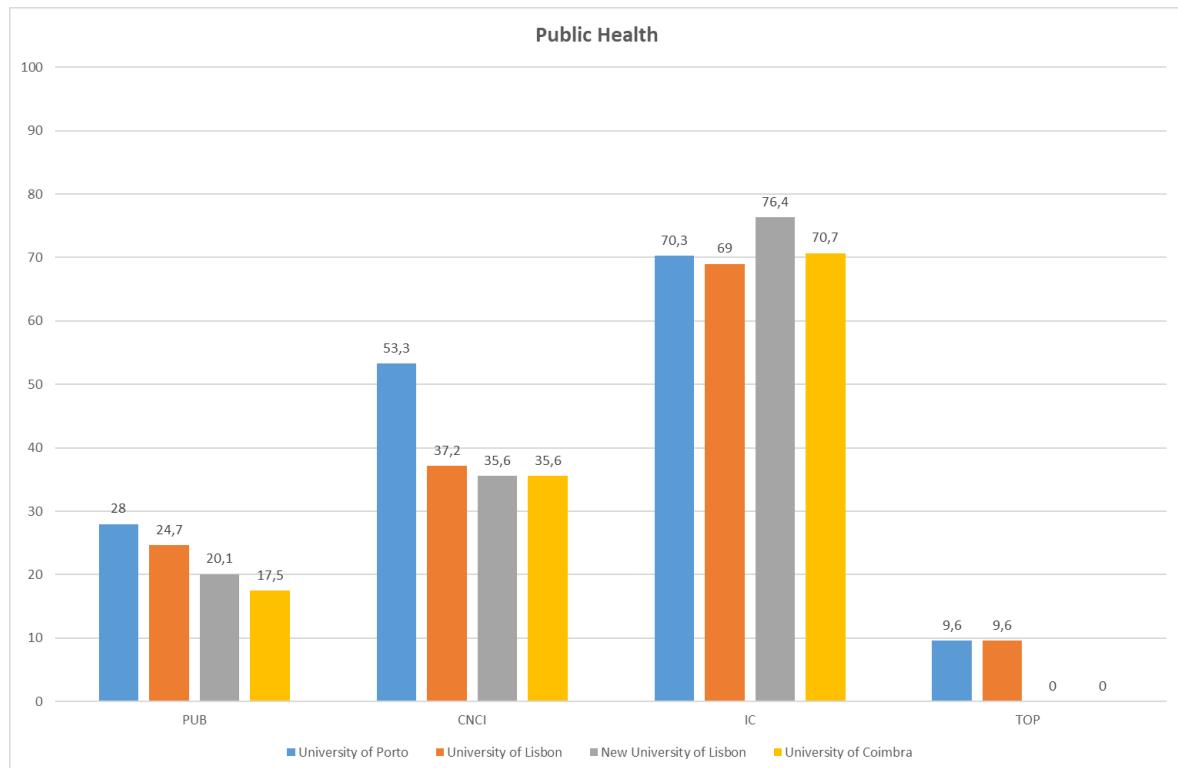
World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
301-400	301-400	149-189	11-21	1-2	University of Lisbon		20,8	65,9	70,8	11,2	0
301-400	301-400	149-189	11-21	1-2	University of Porto		22,7	64,2	67,3	14	0
401-500	401-500	190-230	21-30	3	University of Coimbra		18,7	63,9	65,7	6,5	0
500	500	230	30	3	Nº IES						



### 3.4.2 Public Health

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
151-200	151-200	61-74	5-7	1	University of Porto		28	53,3	70,3	9,6
301-400	301-400	118-159	16-28	2	University of Lisbon		24,7	37,2	69	9,6
401-500	301-400	160-180	29-42	3-4	New University of Lisbon		20,1	35,6	76,4	0
401-500	n/c	160-180	29-42	3-4	University of Coimbra		17,5	35,6	70,7	0
n/c	401-500				University of Minho					
500	500	180	42	4	Nº IES					

n/c - não consta



### 3.4.3 Dentistry & Oral Sciences

Em 2017 não havia nenhuma IES portuguesa entre as 200 listadas.

World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
201-300	82-118	19-37	1	University of Porto		22,2	56,1	64,4	14,4	0
300	118	37		Nº IES						

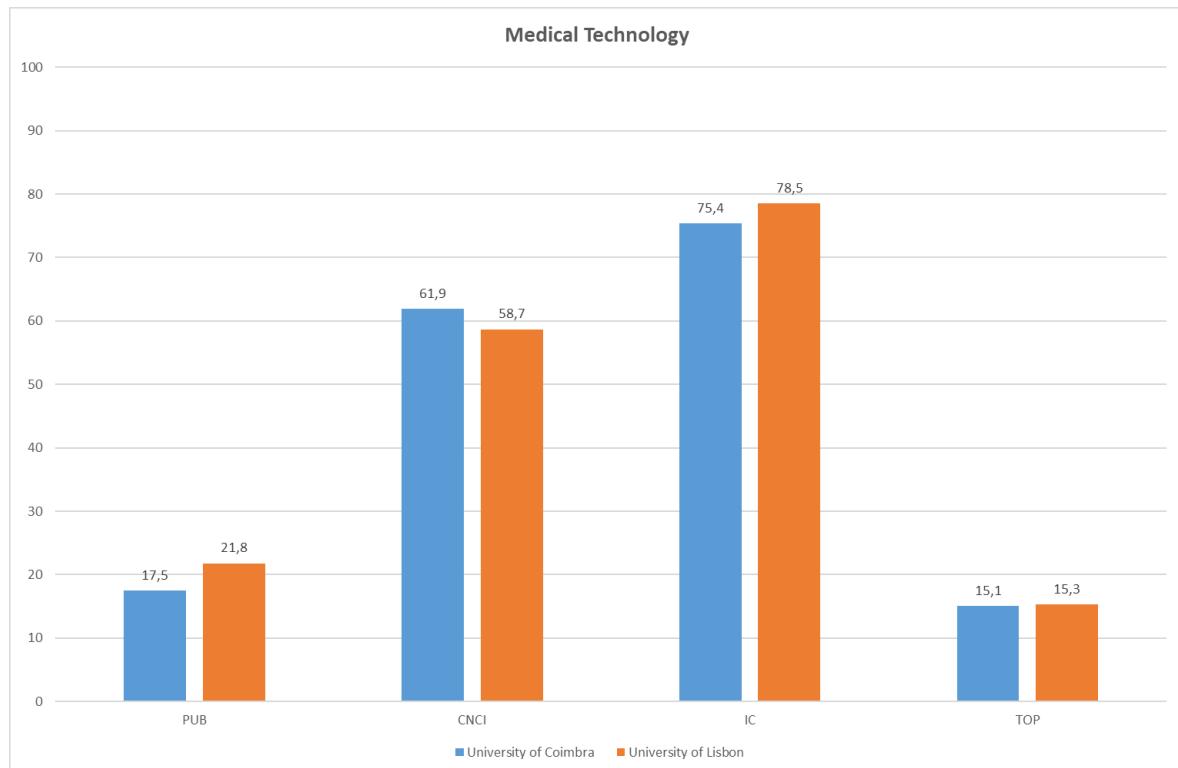
### 3.4.4 Nursing

Como em 2017 não há nenhuma IES portuguesa entre as 300 listadas (100 em 2017).

### 3.4.5 Medical Technology

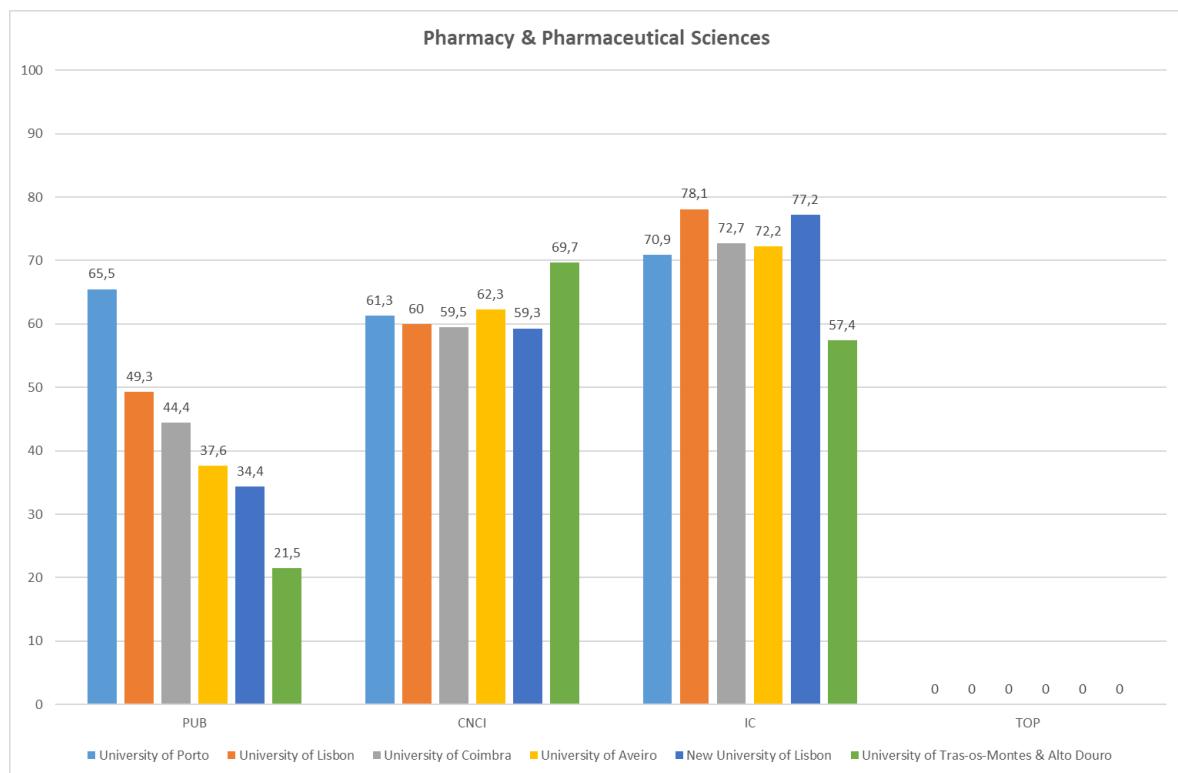
Em 2017, não havia nenhuma IES portuguesa entre as 200 listadas.

World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	108-147	6-10	1-2	University of Coimbra		17,5	61,9	75,4	15,1
201-300	108-147	6-10	1-2	University of Lisbon		21,8	58,7	78,5	15,3
300	147	10	2						



### 3.4.6 Pharmacy & Pharmaceutical Sciences

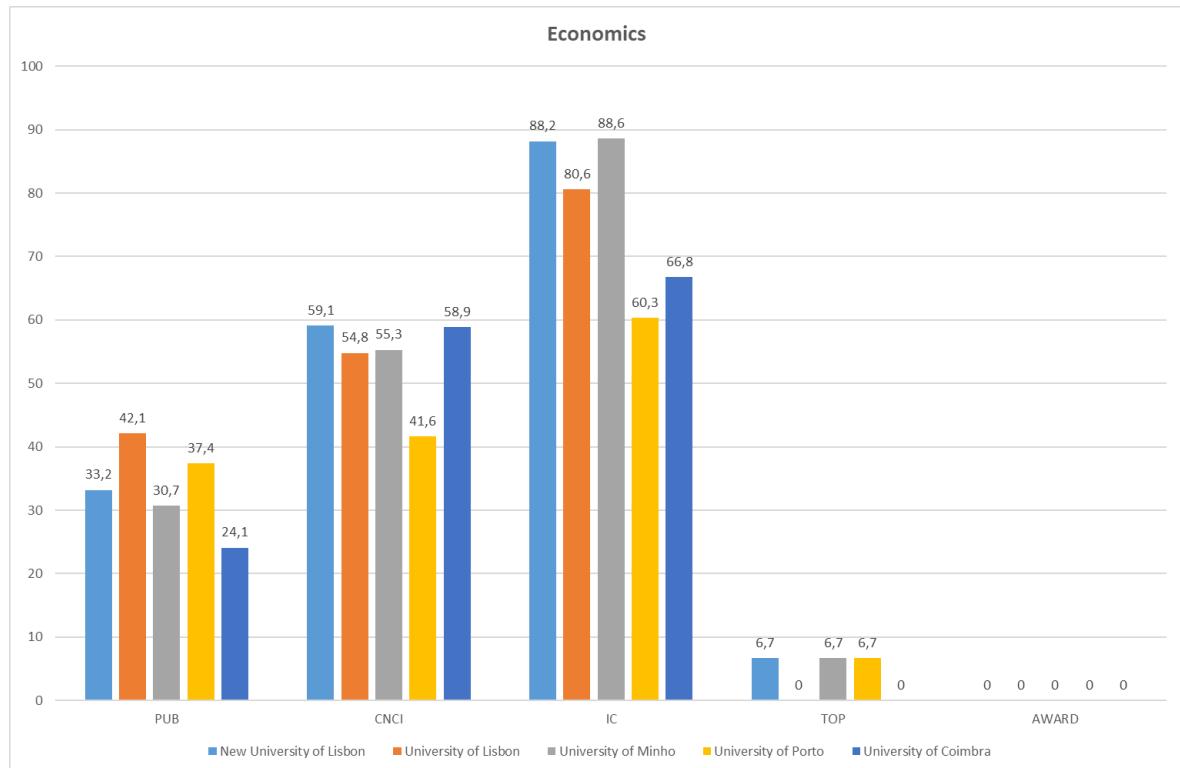
World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
51-75	76-100	36-43	2-3	1	University of Porto		65,5	61,3	70,9	0
101-150	151-200	54-74	4-6	2	University of Lisbon		49,3	60	78,1	0
151-200	201-300	75-100	7-11	3	University of Coimbra		44,4	59,5	72,7	0
201-300	201-300	101-135	12-20	4	University of Aveiro		37,6	62,3	72,2	0
301-400	301-400	136-175	21-27	5	New University of Lisbon		34,4	59,3	77,2	0
401-500	401-500	176-206	28-36	6	University of Tras-os-Montes & Alto Douro		21,5	69,7	57,4	0
500	500	206	36	6	Nº IES					



## 3.5 SOCIAL SCIENCES

### 3.5.1 Economics

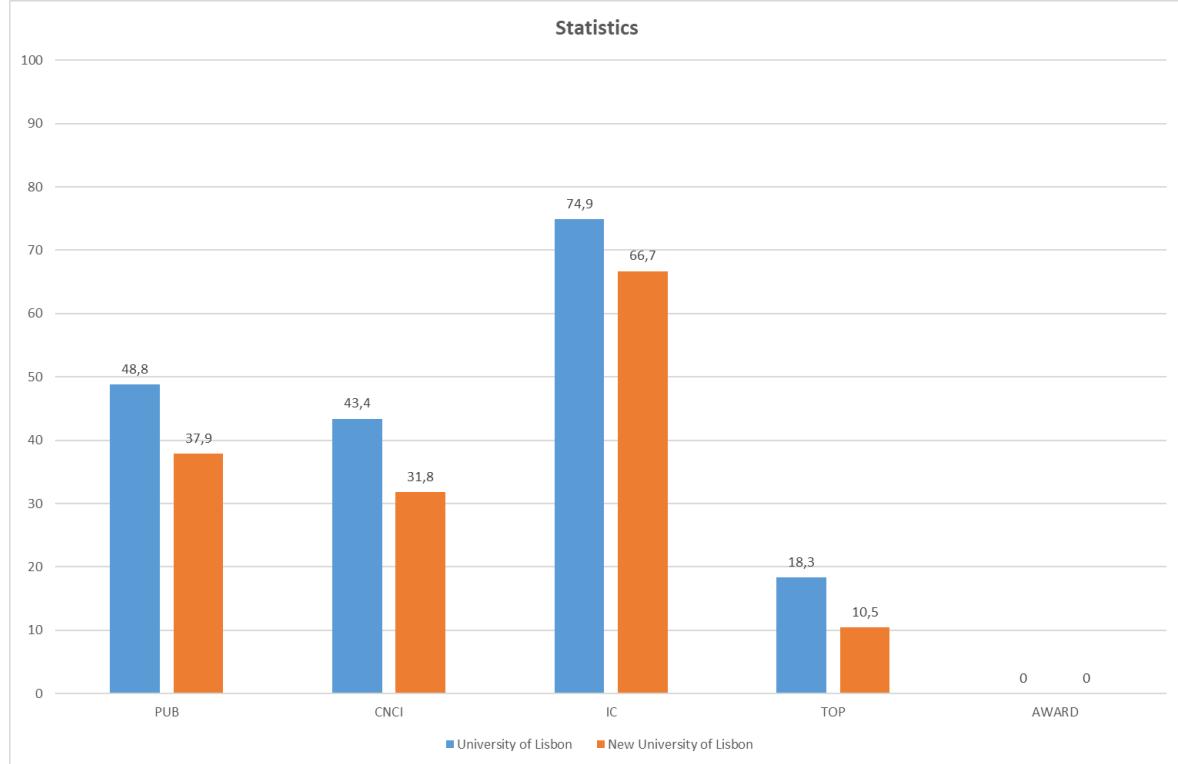
World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
201-300	201-300	92-142	6-15	1-4	New University of Lisbon		33,2	59,1	88,2	6,7	0
201-300	201-300	92-142	6-15	1-4	University of Lisbon		42,1	54,8	80,6	0	0
201-300	201-300	92-142	6-15	1-4	University of Minho		30,7	55,3	88,6	6,7	0
201-300	n/c	92-142	6-15	1-4	University of Porto		37,4	41,6	60,3	6,7	0
401-500	n/c	196-236	25-33	5	University of Coimbra		24,1	58,9	66,8	0	0
500	300	236	33	5	Nº IES						



### 3.5.2 Statistics

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
101-150	101-150	31-50	1-4	1	University of Lisbon		48,8	43,4	74,9	18,3	0
151-200	n/c	51-82	5-10	2	New University of Lisbon		37,9	31,8	66,7	10,5	0
200	200	82	10	2	Nº IES						

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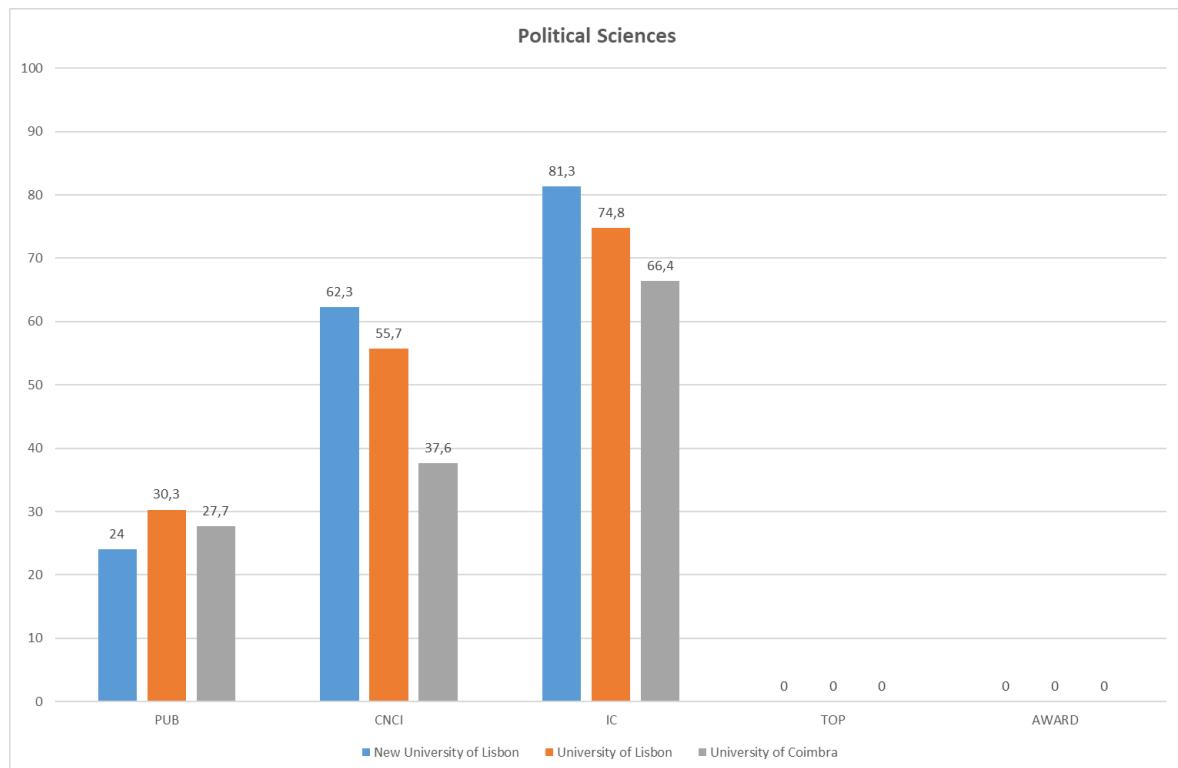
### 3.5.3 Law

Como em 2017, não há nenhuma IES portuguesa entre as 200 listadas (100, em 2017).

### 3.5.4 Political Sciences

Em 2017, não havia nenhuma IES portuguesa entre as 200 listadas.

World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
201-300	85-133	2-11	1-2	New University of Lisbon		24	62,3	81,3	0	0
201-300	85-133	2-11	1-2	University of Lisbon		30,3	55,7	74,8	0	0
301-400	134-173	12-20	3	University of Coimbra		27,7	37,6	66,4	0	0
400	173	20	3	Nº IES						



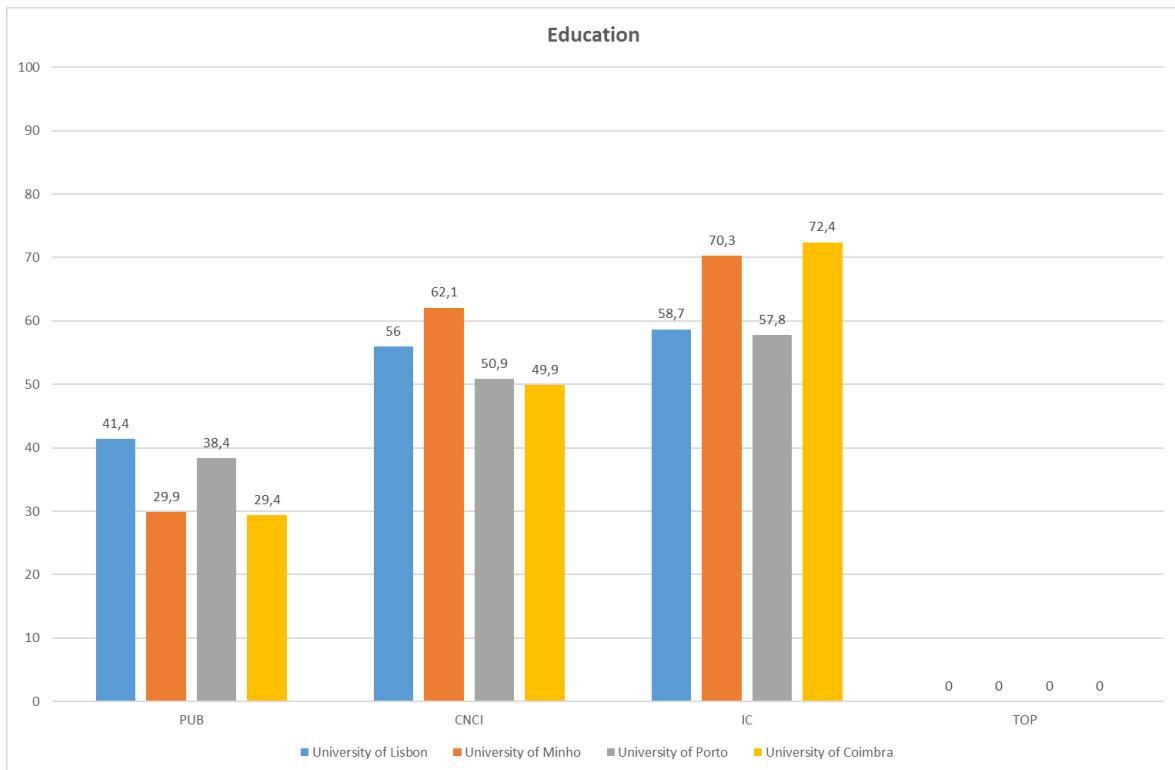
### 3.5.5 Sociology

Como em 2017, não há nenhuma IES portuguesa entre as 200 listadas (100, em 2017).

### 3.5.6 Education

Em 2017, não havia nenhuma IES portuguesa entre as 300 listadas.

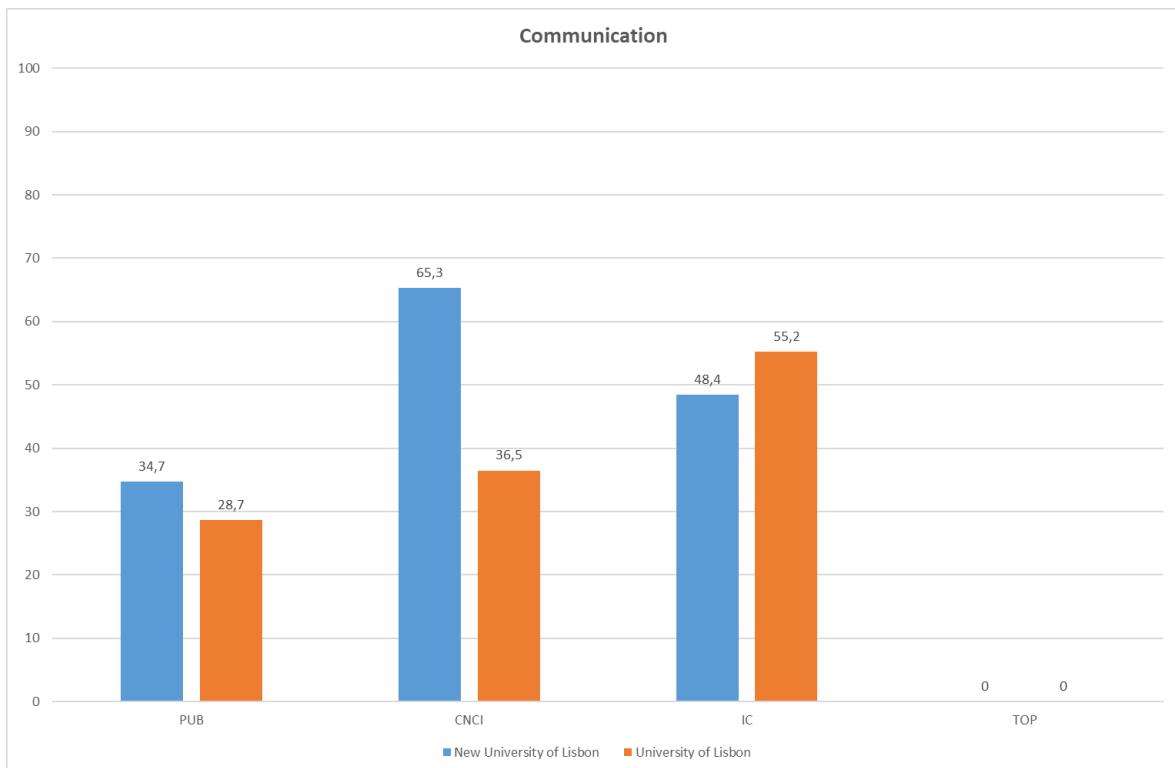
World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	47-79	2-6	1	University of Lisbon		41,4	56	58,7	0
301-400	80-120	7-16	2-3	University of Minho		29,9	62,1	70,3	0
301-400	80-120	7-16	2-3	University of Porto		38,4	50,9	57,8	0
401-500	121-171	17-27	4	University of Coimbra		29,4	49,9	72,4	0
500	171	27	4	Nº IES					



### 3.5.7 Communication

Em 2017, não havia nenhuma IES portuguesa entre as 100 listadas.

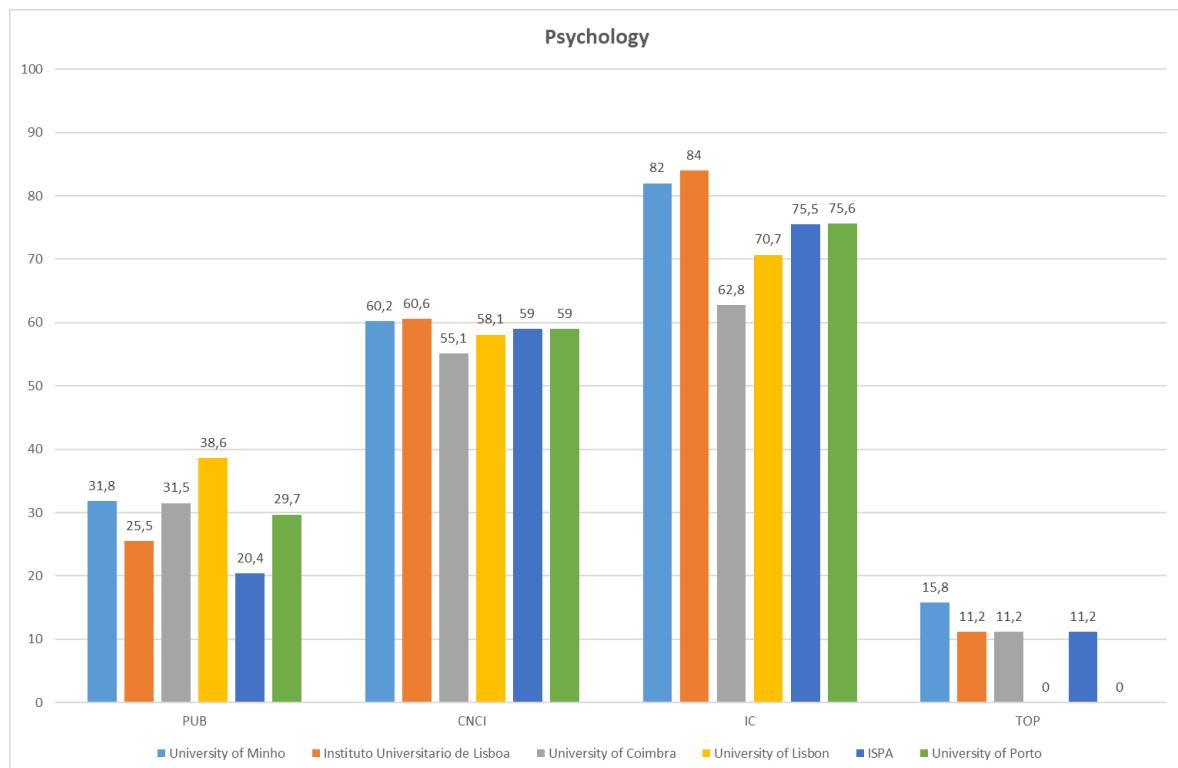
World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	63-105	4-10	1-2	New University of Lisbon		34,7	65,3	48,4	0
201-300	63-105	4-10	1-2	University of Lisbon		28,7	36,5	55,2	0
300	105	10	2	Nº IES					



### 3.5.8 Psychology

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	201-300	75-117	5-7	1	University of Minho		31,8	60,2	82	15,8
301-400	201-300	118-163	8-14	2-4	Instituto Universitario de Lisboa		25,5	60,6	84	11,2
301-400	n/c	118-163	8-14	2-4	University of Coimbra		31,5	55,1	62,8	11,2
301-400	201-300	118-163	8-14	2-4	University of Lisbon		38,6	58,1	70,7	0
401-500	n/c	164-211	15-20	5-6	ISPA		20,4	59	75,5	11,2
401-500	n/c	164-211	15-20	5-6	University of Porto		29,7	59	75,6	0
500	300	211	20	6	Nº IES					

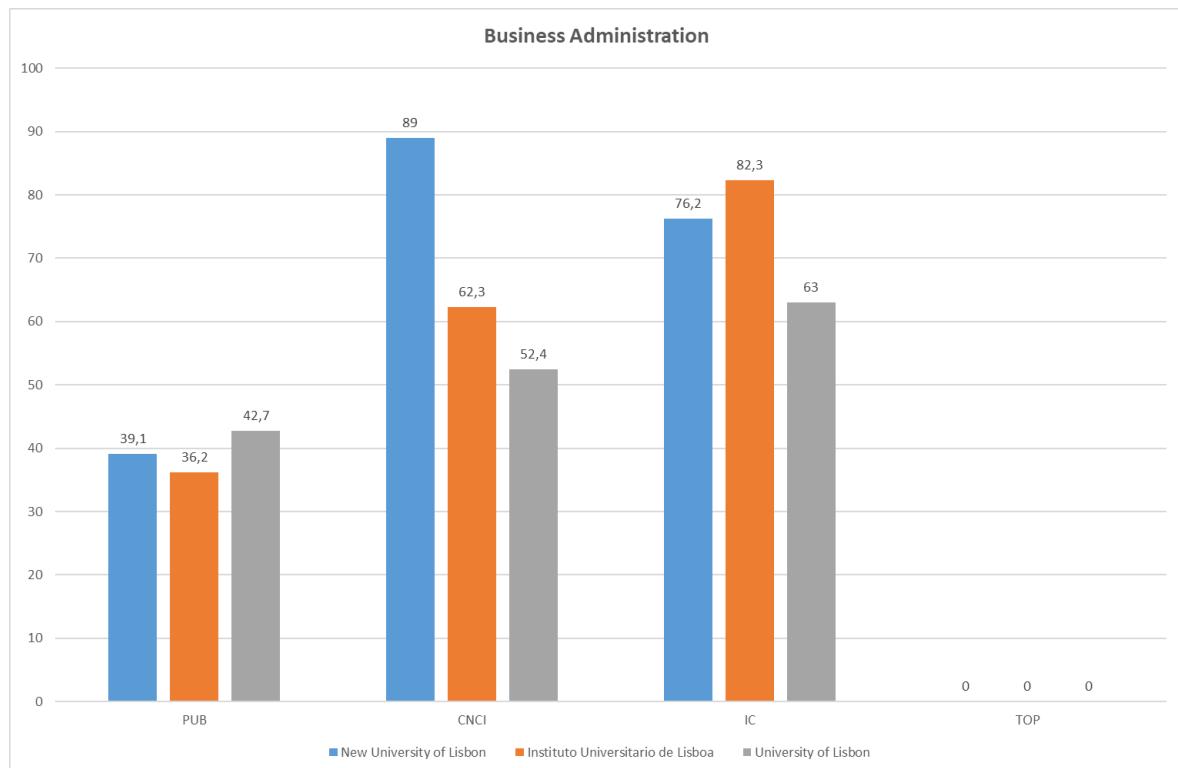
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### 3.5.9 Business Administration

Em 2017, não havia nenhuma IES portuguesa entre as 200 listadas.

World Rank	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
201-300	61-107	4-11	1	New University of Lisbon		39,1	89	76,2	0
301-400	108-163	12-24	2-3	Instituto Universitario de Lisboa		36,2	62,3	82,3	0
301-400	108-163	12-24	2-3	University of Lisbon		42,7	52,4	63	0
400	163	24	3	Nº IES					



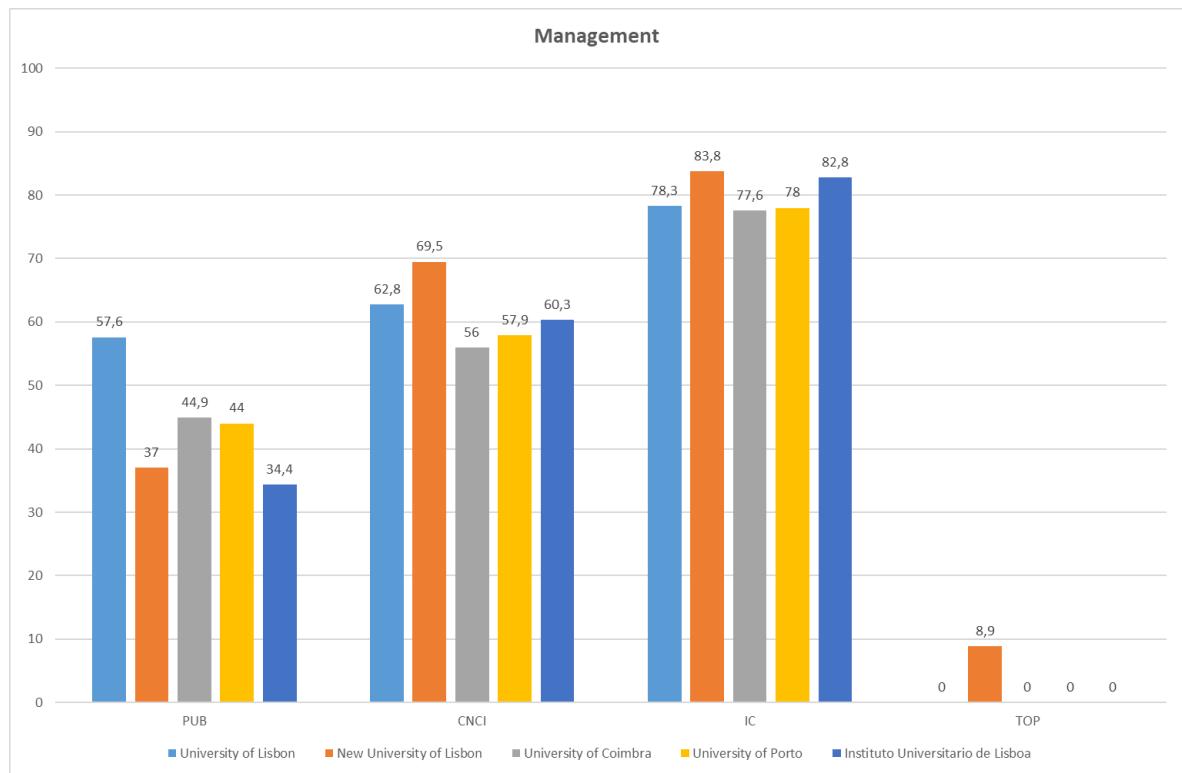
### 3.5.10 Finance

Como em 2017, não há nenhuma IES portuguesa entre as 200 listadas.

### 3.5.11 Management

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP
151-200	201-300	50-69	4-7	1	University of Lisbon		57,6	62,8	78,3	0
201-300	201-300	70-104	8-17	2	New University of Lisbon		37	69,5	83,8	8,9
301-400	301-400	105-148	18-24	3-4	University of Coimbra		44,9	56	77,6	0
301-400	301-400	105-148	18-24	3-4	University of Porto		44	57,9	78	0
401-500	n/c	149-190	25-34	5	Instituto Universitario de Lisboa		34,4	60,3	82,8	0
500	400	190	34	5	Nº IES					

n/c - não consta



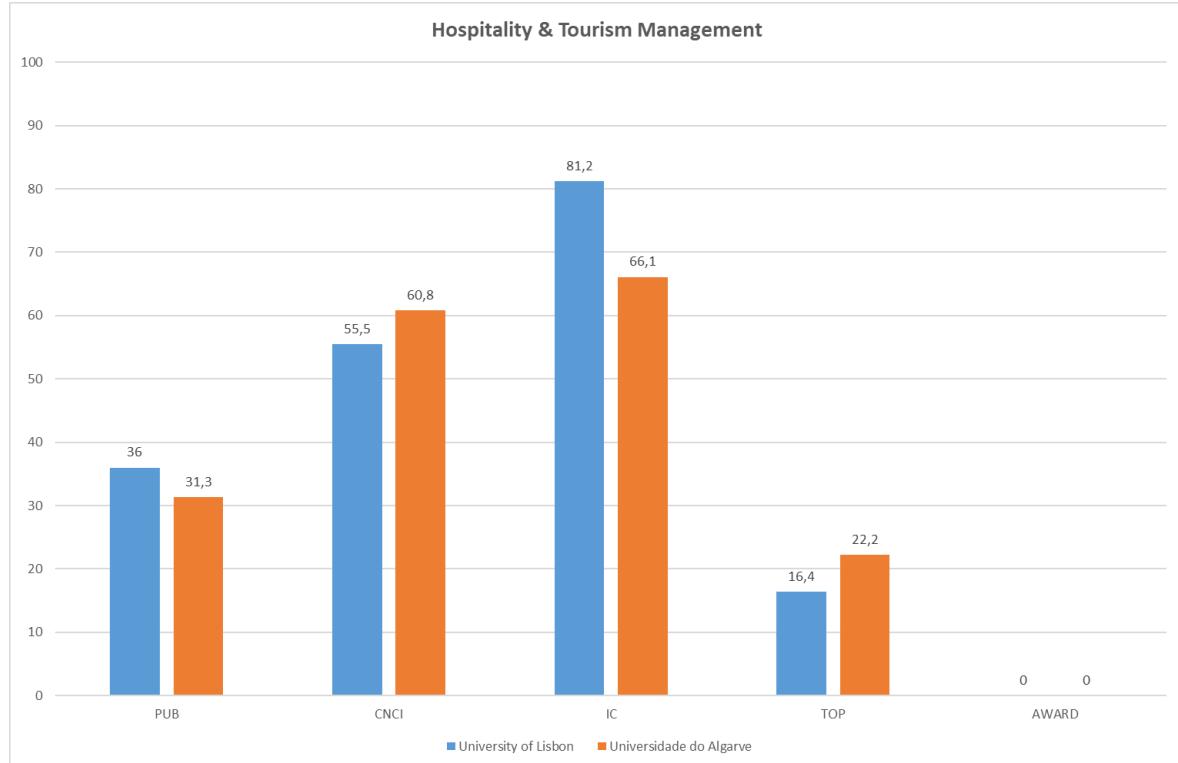
### 3.5.12 Public Administration

Como em 2017, não há nenhuma IES portuguesa entre as 200 listadas (100, em 2017).

### 3.5.13 Hospitality & Tourism Management

World Rank18	World Rank17	Euro Rank	IbAm Rank	PT Rank	Institution	Total Score	PUB	CNCI	IC	TOP	AWARD
76-100	76-100	19-32	5-6	1	University of Lisbon		36	55,5	81,2	16,4	0
101-150	n/c	33-55	7-10	2	Universidade do Algarve		31,3	60,8	66,1	22,2	0
200	100	74	12	2	Nº IES						

n/c - não consta



### 3.5.14 Library & Information Science

Como em 2017, não há nenhuma IES portuguesa entre as 100 listadas.

### 3.6 RESUMO

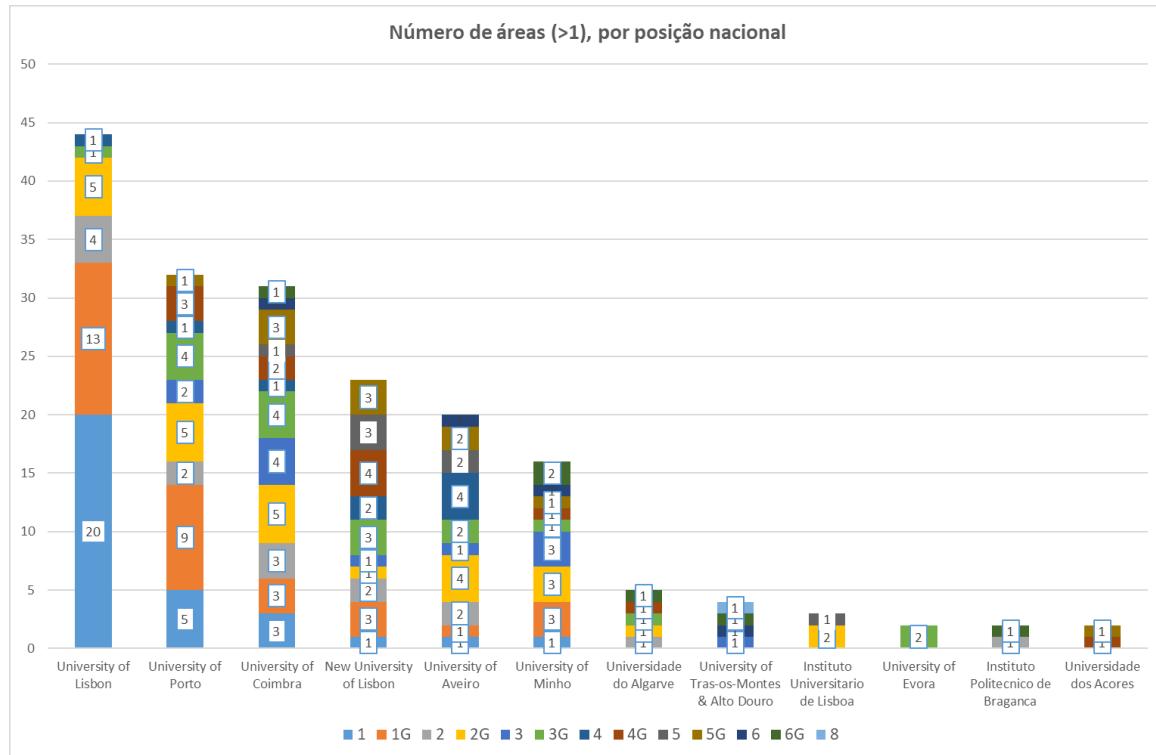
Apresenta-se em resumo as IES portuguesas presentes no ShanghaiRanking's Global Ranking of Academic Subjects 2018, indicando o número de áreas em que são listadas e a posição em que surgem a nível nacional.

	1	1G	2	2G	3	3G	4	4G	5	5G	6	6G	8	Total Áreas
University of Lisbon	20	13	4	5		1	1							44
University of Porto	5	9	2	5	2	4	1	3		1				32
University of Coimbra	3	3	3	5	4	4	1	2	1	3	1	1		31
New University of Lisbon	1	3	2	1	1	3	2	4	3	3				23
University of Aveiro	1	1	2	4	1	2	4		2	2	1			20
University of Minho	1	3		3	3	1		1		1	1	2		16
Universidade do Algarve			1	1		1		1				1		5
University of Tras-os-Montes & Alto Douro					1						1	1	1	4
Instituto Universitario de Lisboa				2					1					3
University of Evora					2									2
Instituto Politecnico de Braganca				1								1		2
Universidade dos Acores								1		1				2
University of Beira Interior								1						1
Catholic University of Portugal										1				1
ISPA									1					1

Legenda:

1, 2, ... - 1<sup>a</sup>, 2<sup>a</sup>, ... posição isolada

1G, 2G, ... 1<sup>a</sup>, 2<sup>a</sup>, ... posição em grupo



## 4. Anexos

### 4.1 Mapping between Web of Science categories and 54 academic subjects

**“Mapping between Web of Science categories and 54 academic subjects**

Academic Subjects	Web of Science Categories
Mathematics	MATHEMATICS
Mathematics	MATHEMATICS, APPLIED
Physics	ACOUSTICS
Physics	ASTRONOMY & ASTROPHYSICS
Physics	OPTICS
Physics	PHYSICS, APPLIED
Physics	PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Physics	PHYSICS, CONDENSED MATTER
Physics	PHYSICS, FLUIDS & PLASMAS
Physics	PHYSICS, MATHEMATICAL
Physics	PHYSICS, MULTIDISCIPLINARY
Physics	PHYSICS, NUCLEAR
Physics	PHYSICS, PARTICLES & FIELDS
Chemistry	CHEMISTRY, ANALYTICAL
Chemistry	CHEMISTRY, APPLIED
Chemistry	CHEMISTRY, INORGANIC & NUCLEAR
Chemistry	CHEMISTRY, MULTIDISCIPLINARY
Chemistry	CHEMISTRY, ORGANIC
Chemistry	CHEMISTRY, PHYSICAL
Chemistry	CRYSTALLOGRAPHY
Chemistry	ELECTROCHEMISTRY
Chemistry	SPECTROSCOPY
Chemistry	POLYMER SCIENCE
Earth Sciences	GEOCHEMISTRY & GEOPHYSICS
Earth Sciences	GEOLOGY
Earth Sciences	GEOSCIENCES, MULTIDISCIPLINARY
Earth Sciences	MINERALOGY
Earth Sciences	PALEONTOLOGY
Geography	AREA STUDIES
Geography	GEOGRAPHY
Geography	GEOGRAPHY, PHYSICAL
Ecology	BIODIVERSITY CONSERVATION
Ecology	ECOLOGY
Oceanography	OCEANOGRAPHY
Atmospheric Science	METEOROLOGY & ATMOSPHERIC SCIENCES
Mechanical Engineering	ENGINEERING, MANUFACTURING
Mechanical Engineering	ENGINEERING, MECHANICAL
Electrical & Electronic Engineering	ENGINEERING, ELECTRICAL & ELECTRONIC
Electrical & Electronic Engineering	IMAGING SCIENCE & PHOTOGRAPHIC TECHNOLOGY
Automation & Control	AUTOMATION & CONTROL SYSTEMS
Automation & Control	ROBOTICS
Telecommunication Engineering	TELECOMMUNICATIONS
Instruments Science & Technology	INSTRUMENTS & INSTRUMENTATION
Instruments Science & Technology	MICROSCOPY
Biomedical Engineering	CELL & TISSUE ENGINEERING
Biomedical Engineering	ENGINEERING, BIOMEDICAL
Computer Science & Engineering	COMPUTER SCIENCE, INFORMATION SYSTEMS

<b>Academic Subjects</b>	<b>Web of Science Categories</b>
Computer Science & Engineering	COMPUTER SCIENCE, CYBERNETICS
Computer Science & Engineering	COMPUTER SCIENCE, SOFTWARE ENGINEERING
Computer Science & Engineering	COMPUTER SCIENCE, ARTIFICIAL INTELLIGENCE
Computer Science & Engineering	COMPUTER SCIENCE, HARDWARE & ARCHITECTURE
Computer Science & Engineering	COMPUTER SCIENCE, THEORY & METHODS
Computer Science & Engineering	COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS
Civil Engineering	CONSTRUCTION & BUILDING TECHNOLOGY
Civil Engineering	ENGINEERING, CIVIL
Chemical Engineering	ENGINEERING, CHEMICAL
Materials Science & Engineering	MATERIALS SCIENCE, BIOMATERIALS
Materials Science & Engineering	MATERIALS SCIENCE, CERAMICS
Materials Science & Engineering	MATERIALS SCIENCE, CHARACTERIZATION & TESTING
Materials Science & Engineering	MATERIALS SCIENCE, COATINGS & FILMS
Materials Science & Engineering	MATERIALS SCIENCE, COMPOSITES
Materials Science & Engineering	MATERIALS SCIENCE, MULTIDISCIPLINARY
Materials Science & Engineering	MATERIALS SCIENCE, PAPER & WOOD
Materials Science & Engineering	MATERIALS SCIENCE, TEXTILES
Nanoscience and Nanotechnology	NANOSCIENCE & NANOTECHNOLOGY
Energy Science & Engineering	ENERGY & FUELS
Energy Science & Engineering	NUCLEAR SCIENCE & TECHNOLOGY
Energy Science & Engineering	ENGINEERING, PETROLEUM
Environmental Science & Engineering	ENGINEERING, ENVIRONMENTAL
Environmental Science & Engineering	ENVIRONMENTAL SCIENCES
Environmental Science & Engineering	ENVIRONMENTAL STUDIES
Water Resources	WATER RESOURCES
Food Science & Technology	FOOD SCIENCE & TECHNOLOGY
Biotechnology	BIOTECHNOLOGY & APPLIED MICROBIOLOGY
Aerospace Engineering	ENGINEERING, AEROSPACE
Marine/Ocean Engineering	ENGINEERING, MARINE
Marine/Ocean Engineering	ENGINEERING, OCEAN
Transportation Science & Technology	TRANSPORTATION
Transportation Science & Technology	TRANSPORTATION SCIENCE & TECHNOLOGY
Remote Sensing	REMOTE SENSING
Mining & Mineral Engineering	MINING & MINERAL PROCESSING
Metallurgical Engineering	METALLURGY & METALLURGICAL ENGINEERING
Biological Sciences	BIOCHEMICAL RESEARCH METHODS
Biological Sciences	BIOCHEMISTRY & MOLECULAR BIOLOGY
Biological Sciences	BIOLOGY
Biological Sciences	BIOPHYSICS
Biological Sciences	CELL BIOLOGY
Biological Sciences	DEVELOPMENTAL BIOLOGY
Biological Sciences	ENTOMOLOGY
Biological Sciences	EVOLUTIONARY BIOLOGY
Biological Sciences	GENETICS & HEREDITY
Biological Sciences	LIMNOLOGY
Biological Sciences	MARINE & FRESHWATER BIOLOGY
Biological Sciences	MATHEMATICAL & COMPUTATIONAL BIOLOGY
Biological Sciences	MICROBIOLOGY
Biological Sciences	MYCOLOGY
Biological Sciences	ORNITHOLOGY
Biological Sciences	PHYSIOLOGY
Biological Sciences	REPRODUCTIVE BIOLOGY

<b>Academic Subjects</b>	<b>Web of Science Categories</b>
Biological Sciences	VIROLOGY
Biological Sciences	ZOOLOGY
Human Biological Sciences	NEUROSCIENCES
Human Biological Sciences	ANATOMY & MORPHOLOGY
Human Biological Sciences	PARASITOLOGY
Human Biological Sciences	PATHOLOGY
Human Biological Sciences	IMMUNOLOGY
Human Biological Sciences	MEDICAL INFORMATICS
Human Biological Sciences	MEDICINE, RESEARCH & EXPERIMENTAL
Agricultural Sciences	AGRONOMY
Agricultural Sciences	HORTICULTURE
Agricultural Sciences	FISHERIES
Agricultural Sciences	SOIL SCIENCE
Agricultural Sciences	FORESTRY
Agricultural Sciences	AGRICULTURE, DAIRY & ANIMAL SCIENCE
Agricultural Sciences	AGRICULTURE, MULTIDISCIPLINARY
Agricultural Sciences	PLANT SCIENCES
Veterinary Sciences	VETERINARY SCIENCES
Clinical Medicine	ALLERGY
Clinical Medicine	ANDROLOGY
Clinical Medicine	ANESTHESIOLOGY
Clinical Medicine	CARDIAC & CARDIOVASCULAR SYSTEMS
Clinical Medicine	CLINICAL NEUROLOGY
Clinical Medicine	CRITICAL CARE MEDICINE
Clinical Medicine	DERMATOLOGY
Clinical Medicine	EMERGENCY MEDICINE
Clinical Medicine	ENDOCRINOLOGY & METABOLISM
Clinical Medicine	GASTROENTEROLOGY & HEPATOLOGY
Clinical Medicine	GERIATRICS & GERONTOLOGY
Clinical Medicine	GERONTOLOGY
Clinical Medicine	HEMATOLOGY
Clinical Medicine	INTEGRATIVE & COMPLEMENTARY MEDICINE
Clinical Medicine	MEDICINE, GENERAL & INTERNAL
Clinical Medicine	OBSTETRICS & GYNECOLOGY
Clinical Medicine	ONCOLOGY
Clinical Medicine	OPHTHALMOLOGY
Clinical Medicine	ORTHOPEDICS
Clinical Medicine	OTORHINOLARYNGOLOGY
Clinical Medicine	PEDIATRICS
Clinical Medicine	PERIPHERAL VASCULAR DISEASE
Clinical Medicine	PSYCHIATRY
Clinical Medicine	REHABILITATION
Clinical Medicine	RESPIRATORY SYSTEM
Clinical Medicine	RHEUMATOLOGY
Clinical Medicine	SURGERY
Clinical Medicine	TRANSPLANTATION
Clinical Medicine	TROPICAL MEDICINE
Clinical Medicine	UROLOGY & NEPHROLOGY
Clinical Medicine	AUDIOLOGY & SPEECH- LANGUAGE PATHOLOGY
Public Health	HEALTH POLICY & SERVICES
Public Health	HEALTH CARE SCIENCES & SERVICES
Public Health	INFECTIOUS DISEASES
Public Health	NUTRITION & DIETETICS
Public Health	PRIMARY HEALTH CARE
Public Health	PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH
Public Health	SOCIAL SCIENCES, BIOMEDICAL

<b>Academic Subjects</b>	<b>Web of Science Categories</b>
Public Health	SUBSTANCE ABUSE
Public Health	ERGONOMICS
Dentistry & Oral Sciences	DENTISTRY, ORAL SURGERY & MEDICINE
Nursing	NURSING
Medical Technology	MEDICAL LABORATORY TECHNOLOGY
Medical Technology	NEUROIMAGING
Medical Technology	RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING
Pharmacy & Pharmaceutical Sciences	CHEMISTRY, MEDICINAL
Pharmacy & Pharmaceutical Sciences	PHARMACOLOGY & PHARMACY
Pharmacy & Pharmaceutical Sciences	TOXICOLOGY
Economics	ECONOMICS
Statistics	STATISTICS & PROBABILITY
Law	CRIMINOLOGY & PENOLOGY
Law	LAW
Political Sciences	INTERNATIONAL RELATIONS
Political Sciences	POLITICAL SCIENCE
Sociology	SOCIOLOGY
Education	EDUCATION & EDUCATIONAL RESEARCH
Education	EDUCATION, SCIENTIFIC DISCIPLINES
Education	EDUCATION, SPECIAL
Communication	COMMUNICATION
Psychology	PSYCHOLOGY
Psychology	PSYCHOLOGY, APPLIED
Psychology	PSYCHOLOGY, BIOLOGICAL
Psychology	PSYCHOLOGY, CLINICAL
Psychology	PSYCHOLOGY, DEVELOPMENTAL
Psychology	PSYCHOLOGY, EDUCATIONAL
Psychology	PSYCHOLOGY, EXPERIMENTAL
Psychology	PSYCHOLOGY, MATHEMATICAL
Psychology	PSYCHOLOGY, MULTIDISCIPLINARY
Psychology	PSYCHOLOGY, PSYCHOANALYSIS
Psychology	PSYCHOLOGY, SOCIAL
Psychology	BEHAVIORAL SCIENCES
Business Administration	BUSINESS
Business Administration	INDUSTRIAL RELATIONS & LABOR
Finance	BUSINESS, FINANCE
Management	MANAGEMENT
Management	OPERATIONS RESEARCH & MANAGEMENT SCIENCE
Public Administration	PUBLIC ADMINISTRATION
Hospitality & Tourism Management	HOSPITALITY, LEISURE, SPORT & TOURISM
Library & Information Science	INFORMATION SCIENCE & LIBRARY SCIENCE

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<sup>3</sup> In [http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/attachment/Mapping\\_between\\_Web\\_of\\_Science\\_categories\\_and\\_54\\_academic\\_subjects.pdf](http://www.shanghairanking.com/Shanghairanking-Subject-Rankings/attachment/Mapping_between_Web_of_Science_categories_and_54_academic_subjects.pdf) acedido 17 de julho de 2018.

## 4.2 ShanghaiRanking Academic Excellence Survey 2018 Top Journals & Conferences

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Academic Subject	Journal Name	ISSN	Percentage Voted
Mathematics	ANNALS OF MATHEMATICS	0003-486X	73%
Mathematics	JOURNAL OF THE AMERICAN MATHEMATICAL SOCIETY	0894-0347	64%
Mathematics	INVENTIONES MATHEMATICAE	0020-9910	55%
Physics	PHYSICAL REVIEW LETTERS	0031-9007	86%
Chemistry	ANGEWANDTE CHEMIE-INTERNATIONAL EDITION	1433-7851	75%
Chemistry	JOURNAL OF THE AMERICAN CHEMICAL SOCIETY	0002-7863	75%
Chemistry	NATURE CHEMISTRY	1755-4330	58%
Chemistry	NATURE MATERIALS	1476-1122	50%
Earth Sciences	EARTH AND PLANETARY SCIENCE LETTERS	0012-821X	64%
Earth Sciences	GEOPHYSICAL RESEARCH LETTERS	0094-8276	57%
Earth Sciences	GEOCHIMICA ET COSMOCHIMICA ACTA	0016-7037	50%
Earth Sciences	NATURE GEOSCIENCE	1752-0894	50%
Ecology	ANNUAL REVIEW OF ECOLOGY EVOLUTION AND SYSTEMATICS	1543-592X	100%
Ecology	ECOLOGY LETTERS	1461-023X	100%
Ecology	TRENDS IN ECOLOGY & EVOLUTION	0169-5347	100%
Mechanical Engineering	JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS	0022-5096	40%
Mechanical Engineering	JOURNAL OF FLUID MECHANICS	0022-1120	30%
Mechanical Engineering	IEEE-ASME TRANSACTIONS ON MECHATRONICS	1083-4435	20%
Mechanical Engineering	JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME	0021-8936	20%
Mechanical Engineering	COMBUSTION AND FLAME	0010-2180	20%
Mechanical Engineering	INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER	0017-9310	20%
Mechanical Engineering	JOURNAL OF SOUND AND VIBRATION	0022-460X	20%
Mechanical Engineering	JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER	0742-4795	20%
Mechanical Engineering	PROCEEDINGS OF THE COMBUSTION INSTITUTE	1540-7489	20%
Mechanical Engineering	MECHANICAL SYSTEMS AND SIGNAL PROCESSING	0888-3270	20%
Mechanical Engineering	SMART MATERIALS AND STRUCTURES	0964-1726	20%
Electrical & Electronic Engineering	PROCEEDINGS OF THE IEEE	0018-9219	67%
Automation & Control	AUTOMATICA	0005-1098	86%
Automation & Control	IEEE TRANSACTIONS ON AUTOMATIC CONTROL	0018-9286	86%
Automation & Control	INTERNATIONAL JOURNAL OF ROBOTICS RESEARCH	0278-3649	57%
Automation & Control	IEEE TRANSACTIONS ON ROBOTICS	1552-3098	57%
Automation & Control	SIAM JOURNAL ON CONTROL AND OPTIMIZATION	0363-0129	57%
Biomedical Engineering	BIOMATERIALS	0142-9612	43%
Biomedical Engineering	JOURNAL OF NEURAL ENGINEERING	1741-2560	43%
Computer Science & Engineering	ACM TRANSACTIONS ON GRAPHICS	0730-0301	36%
Civil Engineering	JOURNAL OF STRUCTURAL ENGINEERING	0733-9445	58%

Academic Subject	Journal Name	ISSN	Percentage Voted
Chemical Engineering	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH	0888-5885	59%
Chemical Engineering	ENERGY & ENVIRONMENTAL SCIENCE	1754-5692	55%
Materials Science & Engineering	NATURE MATERIALS	1476-1122	73%
Nanoscience & Nanotechnology	ACS Nano	1936-0851	100%
Nanoscience & Nanotechnology	ADVANCED FUNCTIONAL MATERIALS	1616-301X	100%
Nanoscience & Nanotechnology	ADVANCED MATERIALS	0935-9648	100%
Nanoscience & Nanotechnology	NANO LETTERS	1530-6984	100%
Nanoscience & Nanotechnology	Nature Nanotechnology	1748-3387	100%
Nanoscience & Nanotechnology	Nano Today	1748-0132	67%
Nanoscience & Nanotechnology	Small	1613-6810	67%
Energy Science & Engineering	ADVANCED ENERGY MATERIALS	1614-6832	100%
Energy Science & Engineering	ENERGY & ENVIRONMENTAL SCIENCE	1754-5692	100%
Environmental Science & Engineering	ENVIRONMENTAL SCIENCE & TECHNOLOGY	0013-936X	100%
Water Resources	JOURNAL OF HYDROLOGY	0022-1694	100%
Water Resources	WATER RESOURCES RESEARCH	0043-1397	100%
Aerospace Engineering	JOURNAL OF SPACECRAFT AND ROCKETS	0022-4650	100%
Aerospace Engineering	AIAA JOURNAL	0001-1452	80%
Aerospace Engineering	JOURNAL OF PROPULSION AND POWER	0748-4658	60%
Remote Sensing	IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING	0196-2892	100%
Remote Sensing	REMOTE SENSING OF ENVIRONMENT	0034-4257	100%
Remote Sensing	ISPRS JOURNAL OF PHOTGRAMMETRY AND REMOTE SENSING	0924-2716	67%
Metallurgical Engineering	ACTA MATERIALIA	1359-6454	83%
Metallurgical Engineering	CORROSION SCIENCE	0010-938X	50%
Metallurgical Engineering	METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE	1073-5623	50%
Metallurgical Engineering	SCRIPTA MATERIALIA	1359-6462	50%
Biological Sciences	CELL	0092-8674	70%
Veterinary Sciences	VETERINARY RESEARCH	0928-4249	88%
Veterinary Sciences	VETERINARY MICROBIOLOGY	0378-1135	75%
Clinical Medicine	NEW ENGLAND JOURNAL OF MEDICINE	0028-4793	89%
Clinical Medicine	LANCET	0140-6736	78%
Public Health	ANNUAL REVIEW OF PUBLIC HEALTH	0163-7525	50%
Public Health	ENVIRONMENTAL HEALTH PERSPECTIVES	0091-6765	50%
Public Health	INTERNATIONAL JOURNAL OF EPIDEMIOLOGY	0300-5771	50%
Dentistry & Oral Sciences	JOURNAL OF DENTAL RESEARCH	0022-0345	100%
Nursing	INTERNATIONAL JOURNAL OF NURSING STUDIES	0020-7489	86%
Nursing	RESEARCH IN NURSING & HEALTH	0160-6891	57%
Pharmacy & Pharmaceutical Sciences	NATURE REVIEWS DRUG DISCOVERY	1474-1776	67%
Economics	ECONOMETRICA	0012-9682	100%
Economics	AMERICAN ECONOMIC REVIEW	0002-8282	89%

Academic Subject	Journal Name	ISSN	Percentage Voted
Economics	JOURNAL OF POLITICAL ECONOMY	0022-3808	84%
Economics	QUARTERLY JOURNAL OF ECONOMICS	0033-5533	79%
Economics	REVIEW OF ECONOMIC STUDIES	0034-6527	79%
Statistics	ANNALS OF STATISTICS	0090-5364	100%
Statistics	JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION	0162-1459	100%
Statistics	JOURNAL OF THE ROYAL STATISTICAL SOCIETY SERIES B-STATISTICAL METHODOLOGY	1369-7412	75%
Statistics	BIOMETRIKA	0006-3444	67%
Law	HARVARD LAW REVIEW	0017-811X	75%
Law	YALE LAW JOURNAL	0044-0094	50%
Political Sciences	AMERICAN POLITICAL SCIENCE REVIEW	0003-0554	100%
Political Sciences	INTERNATIONAL ORGANIZATION	0020-8183	60%
Sociology	AMERICAN JOURNAL OF SOCIOLOGY	0002-9602	100%
Sociology	AMERICAN SOCIOLOGICAL REVIEW	0003-1224	100%
Education	AMERICAN EDUCATIONAL RESEARCH JOURNAL	0002-8312	71%
Education	EDUCATIONAL RESEARCHER	0013-189X	57%
Education	REVIEW OF EDUCATIONAL RESEARCH	0034-6543	57%
Communication	JOURNAL OF COMMUNICATION	0021-9916	100%
Communication	COMMUNICATION RESEARCH	0093-6502	86%
Communication	HUMAN COMMUNICATION RESEARCH	0360-3989	86%
Communication	COMMUNICATION THEORY	1050-3293	57%
Psychology	PSYCHOLOGICAL SCIENCE	0956-7976	88%
Psychology	PSYCHOLOGICAL BULLETIN	0033-2909	50%
Psychology	PSYCHOLOGICAL REVIEW	0033-295X	50%
Psychology	TRENDS IN COGNITIVE SCIENCES	1364-6613	50%
Business Administration	JOURNAL OF CONSUMER RESEARCH	0093-5301	67%
Business Administration	JOURNAL OF MARKETING	0022-2429	67%
Business Administration	JOURNAL OF MARKETING RESEARCH	0022-2437	67%
Finance	JOURNAL OF FINANCE	0022-1082	100%
Finance	JOURNAL OF FINANCIAL ECONOMICS	0304-405X	100%
Finance	REVIEW OF FINANCIAL STUDIES	0893-9454	100%
Management	ACADEMY OF MANAGEMENT JOURNAL	0001-4273	82%
Management	ACADEMY OF MANAGEMENT REVIEW	0363-7425	73%
Management	MANAGEMENT SCIENCE	0025-1909	73%
Management	ORGANIZATION SCIENCE	1047-7039	73%
Management	STRATEGIC MANAGEMENT JOURNAL	0143-2095	64%
Management	ADMINISTRATIVE SCIENCE QUARTERLY	0001-8392	55%
Hospitality & Tourism Management	ANNALS OF TOURISM RESEARCH	0160-7383	83%
Hospitality & Tourism Management	INTERNATIONAL JOURNAL OF CONTEMPORARY HOSPITALITY MANAGEMENT	0959-6119	83%
Hospitality & Tourism Management	INTERNATIONAL JOURNAL OF HOSPITALITY MANAGEMENT	0278-4319	83%
Hospitality & Tourism Management	JOURNAL OF TRAVEL RESEARCH	0047-2875	67%
Hospitality & Tourism Management	TOURISM MANAGEMENT	0261-5177	67%
Hospitality & Tourism Management	JOURNAL OF HOSPITALITY & TOURISM RESEARCH	1096-3480	50%

Academic Subject	Journal Name	ISSN	Percentage Voted
Agricultural Economics	AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS	0002-9092	100%
Agricultural Economics	EUROPEAN REVIEW OF AGRICULTURAL ECONOMICS	0165-1587	75%
Agricultural Economics	JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT	0095-0696	75%
Agricultural Economics	LAND ECONOMICS	0023-7639	50%
Agricultural Economics	AGRICULTURAL ECONOMICS	0169-5150	50%
Library & Information Science	JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	1067-5027	100%
Library & Information Science	JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY	1532-2882	100%
Library & Information Science	MIS QUARTERLY	0276-7783	100%

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Academic Subject	Conference Name	Conference Abbreviation	Percentage Voted
Computer Science & Engineering	Annual Conference on Neural Information Processing Systems	NIPS	27%
Computer Science & Engineering	USENIX Symposium on Operating Systems Design and Implementation	OSDI	27%
Computer Science & Engineering	ACM SIGGRAPH	SIGGRAPH	27%
Computer Science & Engineering	ACM Symposium on the Theory of Computing	STOC	27%
Computer Science & Engineering	International Conference on Computer Aided Verification	CAV	18%
Computer Science & Engineering	ACM Conference on Human Factors in Computing Systems	CHI	18%
Computer Science & Engineering	International Conference on Computational Learning Theory	COLT	18%
Computer Science & Engineering	International Cryptology Conference	CRYPTO	18%
Computer Science & Engineering	Conference on Computer Vision and Pattern Recognition	CVPR	18%
Computer Science & Engineering	IEEE Symposium on Foundations of Computer Science	FOCS	18%
Computer Science & Engineering	Symposium on Principles of Programming Languages	POPL	18%
Computer Science & Engineering	ACM SIGCOMM Conference	SIGCOMM	18%
Computer Science & Engineering	ACM SIGGRAPH Asia	SIGGRAPH Asia	18%
Computer Science & Engineering	Theory of Cryptography Conference	TCC	18%

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<sup>4</sup> In <http://www.shanghairanking.com/subject-survey/top-journals.html> acedido 17 de julho de 2018.

<sup>5</sup> In <http://www.shanghairanking.com/subject-survey/conferences.html> acedido 17 de julho de 2018.

### 4.3 ShanghaiRanking Academic Excellence Survey 2018 Top Award

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Academic Subject	Award	Percentage Voted
Mathematics	Fields Medal	100%
Mathematics	The Abel Prize	82%
Physics	Nobel Prize in Physics	100%
Chemistry	Nobel Prize in Chemistry	100%
Chemistry	Priestley Medal	58%
Chemistry	Wolf Prize in Chemistry	58%
Earth Sciences	Crafoord Prize in Geosciences	36%
Mechanical Engineering	Timoshenko Medal	60%
Mechanical Engineering	ASME Medal	50%
Electrical & Electronic Engineering	IEEE Medal of Honor	100%
Automation & Control	IEEE Control Systems Award	43%
Biomedical Engineering	Pritzker Distinguished Lectureship Award	29%
Computer Science & Engineering	A. M. Turing Award	86%
Civil Engineering	International Award of Merit in Structural Engineering	33%
Chemical Engineering	Andreas Acrivos Award for Professional Progress in Chemical Engineering	41%
Materials Science & Engineering	MRS Medal Award	67%
Materials Science & Engineering	Von Hippel Award	67%
Environmental Science & Engineering	Stockholm Water Prize	55%
Water Resources	Robert E. Horton Medal	100%
Biological Sciences	Nobel Prize in Physiology or Medicine	60%
Clinical Medicine	Nobel Prize in Physiology or Medicine	89%
Clinical Medicine	Lasker~DeBakey Clinical Medical Research Award	56%
Dentistry & Oral Sciences	IADR Distinguished Scientist Award	80%
Nursing	Nurse Researcher Hall of Fame	43%
Pharmacy & Pharmaceutical Sciences	Nobel Prize in Physiology or Medicine	33%
Economics	The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel	95%
Statistics	COPSS Presidents' Award	67%
Political Sciences	The Johan Skytte Prize in Political Science	60%
Management	The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel	18%
Hospitality & Tourism Management	Ulysses Prize	50%

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<sup>6</sup> In <http://www.shanghairanking.com/subject-survey/awards.html> acedido 17 de julho de 2018.