MASTER IN MEDICINE

2014 – A SNAPSHOT

ASSESSMENT OF THE ACADEMIC YEAR 2013/2014

UNIVERSITY OF MINHO
School of Health Sciences
Medical Education Unit

Foreword

This Snapshot presents a summary of the 2013/2014 edition of the original 6 year and of the alternative graduate entry tracks of undergraduate medical degree in the School of Health Sciences of the University of Minho (ECS-UM). It is a compilation produced by the Medical Education Unit (MEU) as part of the internal processes of quality evaluation. The primary objective is that of contributing to the accountability before the general public, health care system and current and future students.

The annual Snapshot presents empirical data and results from educational research related to the undergraduate medical degree. It is sustained by permanent and systematic data gathering and organization by the MEU, which is also responsible for the considerations in the document.

This year, two special highlights are the international awards related to the medical degree *ASPIRE* recognition for student engagement in medical school and *Prémios De Educación Médica- Cátedra De Educación Médica* of the *Lilly Foundation - Universidad Complutense de Madrid*. As usual, the current snapshot includes student academic performance, student evaluations of the undergraduate medical degree (curricular units, faculty and clerkships) and a socio-demography of the annual entering class for 2013/2014. Also included is an update of Minho's Longitudinal Study of medical education (ELECSUM).

This Snapshot will be distributed to the School's External Advisory Committee, to faculty members and to the student body of the School of Health Sciences.

School of Health Sciences
Medical Education Unit
University of Minho

Snapshot Index

1. STUDY PLAN

Alternative Track

This was the third year in operation of the 4-year graduate entry track of ECS-UM's undergraduate medical degree. The alternative track was approved by the Portuguese Agency for Assessment and Accreditation of Higher Education (A3ES) and credits student's previous academic accomplishments with 120 ECTS corresponding to the initial 2 years of the 6 year program. In 2013/2014, there were 18 positions available for new students (15% of numerus clausus - Decreto-Lei n°40/2007 of 20th February).

Table 1: Study plan: Graduate entry track

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS
1st year	CBB / SC-CSH / P / C	Various	60
		TOTAL	60
2nd year	CBB / SC-CSH / P / C	Various	60
		TOTAL	60
3rd year	C	Introduction to Clinical Medicine	10,5
	CBB / P	Foundations of Medicine	45
	SC-CSH	Community Health, Human and Social Science	4,5
		TOTAL	60
		Degree in Medical Basic Sciences	180
4th year		The same as the original track	60
		TOTAL	60
5th year		The same as the original track	60
		TOTAL	60
6th year		The same as the original track	60
		TOTAL	60
		Integrated Master in Medicine	360

ECTS - European Credit Transfer Units
C - Clinical; CBB –Biological and Biomedical Sciences;
SC-CSH - Community Health, Human and Social Sciences; P - Pathology

Original track

This was the fourth edition of the original curricular plan implemented in the academic year 2010/2011. There were no changes to last year's program.

Table 2: Study plan: original track

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS
1st year	CBB	Introduction to the Medical Degree Course	4
	CBB	Molecules and Cells	24
	CBB	Functional and Organic Systems I	25
	SC-CSH	Training in a Health Centre	1
	SC-CSH	First Aid	1
	CBB/SC-CSH/P/C	Option Project I	4
	SC-CSH	Vertical Domains I	1
		TOTAL	60
2nd year	CBB	Functional and Organic Systems II	26
	CBB	Functional and Organic Systems III	23
	SC-CSH	Family, Society and Health I	4
	CBB/SC-CSH/P/C	Option Project II	6
	SC-CSH	Vertical Domains II	1
		TOTAL	60
3rd year	P	Biopathology and Introduction to Therapeutics	43
	SC-CSH	Introduction to Community Health	4
	C	Introduction to Clinical Medicine	10,5
	SC-CSH	Follow-up of a Family II	1,5
	SC-CSH	Vertical Domains III	1
		TOTAL	60
		Degree in Medical Basic Sciences	180
4th year	SC-CSH	Health Centre Residency I	8
	C	Medicine I Residency	17
	C	Maternal and Child Health Residency	17
	C	Clinical Neurosciences	10
	C/P/CBB	From the Clinic to Molecular Biology I	3
	CBB/SC-CSH/P/C	Option Projects III	4
	SC-CSH	Vertical Domains IV	1
		TOTAL	60
5th year	SC-CSH	Health Centre Residency II	13
	C	Surgery Residency	18,5
	C	Medicine II Residency	16
	C	Optional Residencies	8,5
	C/P/CBB	From the Clinic to Molecular Biology II	3
	SC-CSH	Vertical Domains V	1
		TOTAL	60
6th year	SC-CSH	Health Centre Residency III - Final Training	10,5
	C	Hospital Residencies – Final Training	39,5
	C/P/CBB	From the Clinic to Molecular Biology III	3
	CBB/SC-CSH/P/C	Option Projects - Final Training	7
		TOTAL	60
		Integrated Master Program in Medicine	360

ECTS – *European Credit Transfer Units*

C – Clinical; **CBB** – Biological and Biomedical Sciences; **SC-CSH** – Community Health and Human and Social Sciences; **P** – Pathology

2. STUDENT EVALUATIONS: A PROBLEMATIC YEAR

Traditionally, the school's annual evaluation process has achieved high student participation in answering questionnaires about the quality of courses and of faculty. In 2013/2014, student participation in evaluations was unusually low and well below the school's expectations. The most likely reasons can be found in administrative and technical issues related to the timing and format of collection. There were significant delays in the administration of the questionnaires, which were caused by issues related with permissions within the University of Minho's IT survey delivery system. There was also a negative impact of the replacement of paper questionnaires by the online delivery format used in the present year. Further issues related to duplications between school and university surveys strongly discouraged students to complete their evaluations. The school is attentive to this situation and alternative procedures are being planned for the following year.

3. THE THIRD YEAR EXPERIENCE WITH THE ALTERNATIVE TRACK STUDY PLAN

Selection Process

The 2013-2014 graduate entry track selection process was identical to the previous year. Applicants to the 18 places available were selected through a 3-step process: (1) administrative selection - mandated the delivery of a set of certificates, that included holding a previous degree with a final mark equal or above 14/20 points; (2) written examination of knowledge – a test with 100 multiple choice questions on biology, mathematics, chemistry and physics; (3) Multiple Mini-interview – a series of 10 short stations, intended to assess personal attributes and soft skills related to the practice of medicine. The MMIs were developed in Minho by a team of faculty with expertise in previous MMIs and OSCEs. The Blueprint is presented in Table 3: Blueprint for the 2013/2014 MMI examination.
The examination was set up on the 2nd floor of the ECSaude building, in three rounds, within one day.

Table 3: Blueprint for the 2013/2014 MMI examination

TOPIC	Dissuasion	Breaking bad news	Science and citizenship	Plagiarism & cheating	Self-appraisal	Collaboration, team work	Academic Integrity	Collaboration, team work
critical thinking	x		x	x				
ethical/moral decision making		x					x	
communication	x	x	x					
empathy	x	x						
integrity (INT)				x				
self-evaluation					x			
Team-work						x		x

In the third edition of the MMIs in Minho, there were 20 examiners, 12 (60%) who were ECS staff and there were 8 external (40%). Both the applicants and the assessors evaluated the experience at the end of each round, answering a short questionnaire. When asked to state their preference between the format "Classical interview" and "Multiple Mini Interview", 22 (78,5%) of the responding applicants stated a preference for MMIS. Table 4 presents further evidence of high acceptability by applicants.

Table 4: Acceptability of the MMI by candidates (n=28)

	Strongly Disagree	Slightly Disagree	Disagree	Agree	Slightly Agree	Strongly Agree
This MMIs are a fair format	0	1	0	13	3	11
Classical interviews (CIs) are a fair format	0	8	8	2	8	0
I enjoyed participating in this MMIs	0	0	0	11	1	15
I enjoy participating in CIs	0	5	2	1	12	1
This MMIs are effective to assess my competencies	0	1	0	9	5	12
This CIs are effective to assess my competencies	0	3	2	4	14	0

In addition, there were invited external observers that answered an online form on the experience. The external observers highlighted a number of positive strong aspects in the MMI: the overall structure, organization and realization in a somewhat formal setting but serious and credible, the diversity of stations, the heterogeneity of assessors and collective discussion of each candidate individually, with projection of the respective photograph.

Applicants and entrants

In 2013/2014, there were 152 applicants to the graduate entry process (8 applicants/place). The top-scoring 28 students were admitted to the MMIs. 18 new students were selected (2 did not register for the academic year and thus the next two in the selection were called in - only one registered. 1 student canceled the registration and no other was called). Table 5: Exam and MMI scores shows the exam end MMI scores for the applicants and the selected students.

Table 5: Exam and MMI scores

	Written exam		**Multiple mini interviews**	
	Min - Max	Average ± Standard Deviation	Min - Max	Average ± Standard Deviation
Applicants	3,4 - 14,4	8,9±2,4	–	–
Top 28 applicants	11,2 - 14,4	12,4±1,0	9,0 – 16,4	12,6±1,8
Selected students	11,2 – 14,4	12,6±1,1	11,4 – 16,4	13,5±1,3

65% of the 17 students with valid registrations in the alternative track chose the University of Minho as their first option (as opposed to 5% last year). 29% also applied to other medical schools. 100% intend to matriculate in Minho in year 2. Ages varied from 24 to 33 (mean 27,82; SD 3,14) and 47% of the students were female. The main reasons pointed by the students for choosing the medical degree were: educational, vocational and professional interest (94%), aspiring to a more stable professional future (82%) and dissatisfaction with their previous professional occupation (59%). Amongst the reasons that influenced students to choose ECS-UM were: the geographical proximity (53%) and the prestige of the degree (59%). The majority of students originated from the districts of Braga (65%) or Porto (24%). For 53% of the students, entering the ECS-UM medical degree implied changing home. The major difficulties anticipated were: time management (88%), learning problems or performance (41%) and economic problems (35%). 41% of the students hold a master degree and none were PhDs.

Table 6: Previous degrees of the graduate entry studentspresents the previous degrees of the new students. This new pool of students has a higher representation of Pharmacists, Clinical analysts, Physiotherapist and Biologists when compared to other degrees. More detailed information can be found below (Table 6: Previous degrees of the graduate entry students). At start of the medical degree, 57% had no professional activity, 29% were working part-time and 14% were working full time.

Table 6: Previous degrees of the graduate entry students

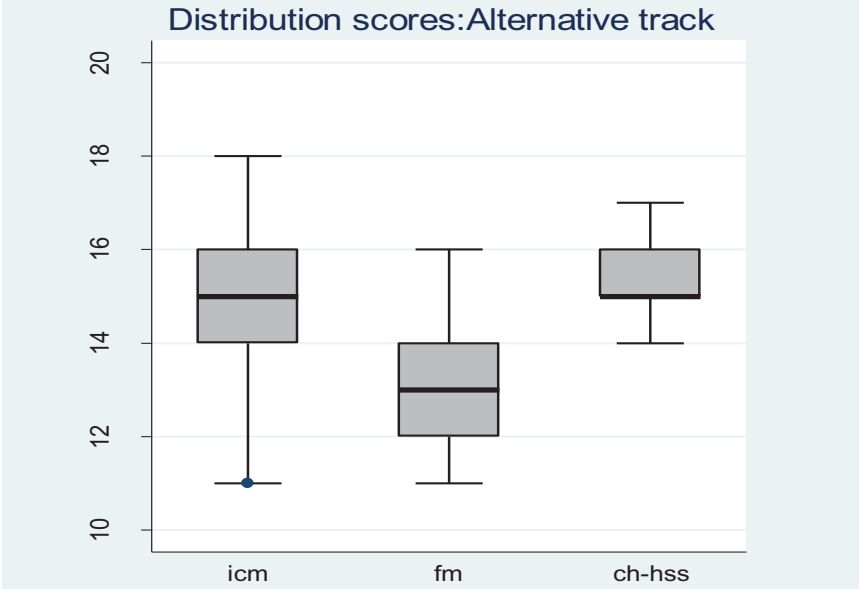
	Academic year of Admission					
	2011/2012		2012/2013		2013/2014	
	N	%	N	%	N	%
Clinical analysis	1	5%	0	0%	2	13%
Pathology Anatomy	0	0%	2	11%	0	0%
Pathology, cytology and tanatological Anatomy	1	5%	0	0%	0	0%
Physical Education	0	0%	0	0%	1	6%
Biology	1	5%	0	0%	2	13%
Biomedical Engineering	0	0%	0	0%	1	6%
Microbial Biology and genetics	1	5%	0	0%	0	0%
Biochemistry	1	5%	1	6%	1	6%
Cardio Pulmonology	1	5%	0	0%	1	6%
Nursing	5	25%	2	11%	1	6%
Biological Engineering	2	10%	0	0%	0	0%
Pharmaceutical Sciences / Pharmacy	1	5%	5	28%	2	13%
Mathematics	0	0%	0	0%	1	6%
Nutrition Sciences	0	0%	1	6%	1	6%
Physics and chemistry	1	5%	1	6%	0	0%
Physiotherapy	0	0%	2	11%	2	13%
Psychology	0	0%	1	6%	0	0%
Dental Medicine	1	5%	0	0%	0	0%
Integrated Master in Industrial Electronics Engineering	1	5%	1	6%	0	0%
Civil Engineering	0	0%	1	6%	0	0%
Chemistry	1	5%	0	0%	0	0%
Radiology	2	10%	0	0%	0	0%
Veterinary Medicine	0	0%	1	6%	1	6%
Sample (representativeness)	20	100%	18	95%	16	94%

Academic Performance

At the end of the academic year, 81% of the newly admitted students successfully concluded all the 1st year curricular units. In 2014/2015, these students will converge with the 4th year students of the original track.

The highest failure rate (12,5%) was registered for the curricular unit "Foundations of Medicine" which corresponds to 45 ECTS. Considering all students registered - 1st and 2nd enrollment - the failure rate is 13%. Concerning performances in the unit "Introduction to Clinical Medicine", 16 new students (100%) completed the course assessment program, of whom two failed (12,5%). For the whole group of students (alternative and original track) the failure rate was 10%. In summary, the vast majority of the new students successfully completed their year 1 which suggests that the selection process and the course "Foundations of Medicine" prepared these students to succeed academically in the course Introduction to Clinical Medicine, with a level of scientific preparation comparable to that of the third year students of the 6 year program.

Figure 1: Alternative track students' academic success.



	icm	fm	ch-hss
Failure	3 (17%)	3 (14%)	0 (0%)

Legend:

icm: Introduction to clinical medicine
fm: foundations of medicine
ch-hss: community health, human and social sciences

4. ORIGINAL TRACK: THE ANNUAL EXPERIENCE WITH THE UNDERGRADUATE MEDICAL PROGRAM

The 2013/2014 experience in terms of student performance and the available student evaluations were overall identical to the previous year. Some important notes follow. Within the 6 year program, several courses experienced drops in failure rates, particularly in year 2 - Functional and Organic Systems II and III, Family, Society and Health the drops were from 20% to 6%, 20% to 6%, and 11% to 2%, respectively and year 4 – failures in the Medicine I and the Clinical Neurosciences Residencies, fell, respectively, from 13 to 7% and from 14 to 6%. The Year 1 Functional and Organic Systems I continues, to exhibit the highest student failure rates (30%, 27% in 2012/13). In what concerns the alternative track, academic success increased in the course "Fundamentals of Medicine" (failure rates dropped from 24% to 14%). Some courses had failure rates that increased more than 5% relatively to the previous years: Year 3 Introduction to Clinical Medicine, Year 4 Maternal and Child Residency, Year 5 Health Centre Residency II and From the Clinic to Molecular Biology.

The student response rates to the evaluations questionnaires were below 50% for 17 of the 36 courses (47% of the courses) and under 25% for 9 courses (25%). Therefore, conclusions about acceptability by students suffer from the limitation of poor representativeness of the population. Nevertheless, the available evaluations on the curricular units were clearly positive. There were 26 units in a total of 36 considered globally "excellent" by over 75% of the respondents, including all the electives and the Vertical Domains. The curricular units that considered excellent by less than half of the respective classes were Introduction to Community Health, Health Center Residency II and From Clinical to Molecular Biology (III). The courses From Clinical to Molecular Biology (II), Maternal and Child Health Residency, Training in a Health Center, Functional and Organic Systems III, Health Centre Residency (final training) received appreciations superior in at least ten perceptual points relatively to the previous year.

5. STUDENTS TRANSFERRED FROM AVEIRO MEDICAL DEGREE: SUMMARY OF THE EXPERIENCE

In 2013/2014 the medical degree of the University of Aveiro was closed by the Portuguese accrediting agency and the students registered in previous academic years were distributed across the other medical schools. In Minho, there were 10 incoming students who enrolled in individual 4th and 5th year curricular units to complete a program equivalent to 5 years of training in the medical school. These students successfully completed all the courses and will enroll in the 6th year in 2014/2015.

6. ORIGINAL TRACK: STUDENT SOCIO-DEMOGRAPHY: RETROSPECTIVE DESCRIPTIVE ANALYSIS

Applicants

In 2013/2014, there were 762 applicants to the undergraduate medical degree of ECS-UM for the national admissions process ("Concurso Nacional de Acesso", approximately 6 applicants/available place). There is no public available information on the remaining special admissions processes ("Regimes Especiais de Acesso").

New students

128 students were admitted through the National Admissions Process (contingents: general n=126 and islands/immigrants n=2), of whom 119 have valid registrations. 68% of these students chose the University of Minho as their 1st option (72% in the previous year). Admission grade point averages (GPAs) varied from 165.8 (island contingent) to 192,8 (general contingent) (M 182,38; SD 3,9). The lowest admission grade for the general contingent (M 182,63; SD 3,41) was 179,20 (184.5 in 2011/2012 and 182,5 in 2012/2013). The admission GPAs show no further significant differences from the previous years. 2 students were admitted through Special Admissions Processes (Portuguese speaking African countries) and one student was transferred from another medical school.

The socio-demography of the 123 students in the 2013/2014 entering group, overall, was similar to matriculates over the past years. 61% of the students came from the public school system and 61% were first time college students. Student´s age varied from 17 to 28 (mean 18.9; SD 1,29). 69% of the students were female. The retrospective analysis reveals that the factors that have influenced students to choose the ECS-UM have remained quite stable across time. In the present year, 79% of matriculates referred geographical proximity (it was the most influential for 44%). This might explain why only 15% students originate from districts in the country other than Braga (59% of matriculates) and Porto (26%). Nevertheless, 49% of the students left their family homes. Another primary factor taken into consideration by the students (67%) was the quality of the teaching and learning process (it was the most influential for 23% of the students). More detailed information can be found in the appendix.

7. RESEARCH IN MEDICAL EDUCATION

This year's snapshot includes new insights derived from Minho's Longitudinal Study (ELECSUM) and three publications which illustrate the ongoing research in medical education associated with the undergraduate medical degree.

Student geographical practice preferences insights: from the ELECSUM

The demography of doctors and clarifying how medical schools can contribute to workforce recruitment, is an important research topic worldwide. Some of the data included in the longitudinal Study refer to students choices regarding where they intend to work when they finish the degree. The data are collected in 3 moments, with the same questionnaire (see appendix): when students start the undergraduate program (admissions information), at the end of the 3rd year (1st cycle information) and when students finish the degree (graduation).

The next tables show that most students have a clear preference for practicing in a medium size urban area. That tendency only seems to get stronger as they move across the graduate program. The same is observed for student preference for the Northern Littoral region with the percentage of students being even higher (83%).

Table 7: Students preferences by urban/rural area (data collected from different student cohorts for each questionnaire)

	Admissions (cohorts 10-13)		1st cycle (cohorts 6-12)		Graduation (cohorts 2-9)	
	N	%	N	%	N	%
Big urban area	179	36%	185	29%	53	18%
Medium sized urban area	283	56%	395	63%	207	71%
Small urban area	31	6%	40	6%	25	9%
Rural area	10	2%	10	2%	7	2%
Total	503	100%	630	100%	292	100%

Table 8: Students preferences by geographical region

		Admission Questionnaire		Graduate Questionnaire		Masters Graduate Questionnaire	
		N	%	N	%	N	%
Littoral	North	386	77%	487	79%	240	83%
	Centre	20	4%	26	4%	9	3%
	South	10	2%	12	2%	3	1%
Interior	North	20	4%	25	4%	16	6%
	Centre	1	0%	6	1%	1	0%
	South	2	0%	2	0%	1	0%
	Autonomous Regions	11	2%	17	3%	13	4%
	Overseas	53	11%	44	7%	7	2%
	Total	503	100%	619	100%	290	100%

SHS-Uminho achieved the "ASPIRE" award for student engagement in medical school

The School of Health Sciences of the University of Minho was one of the 7 schools in the world contemplated with the ASPIRE award of the Association for Medical Education in Europe (AMEE) for excellence in the field of student engagement. According to AMEE, "The notion of excellence embodies the active engagement with scholarship and a desire to seek continuous improvement in the area of student engagement.". The School was recognized for the four spheres of engagement:

1. Student engagement with the management of the medical school, including matters of policy and the mission and vision of the school. (Student engagement with the structures and processes)
2. Student engagement in the provision of the medical school's educational program. (Student engagement with the delivery of teaching and assessment)
3. Student engagement in the academic community. (Student's engagement in the school's research program and participation in meetings)
4. Student engagement in the local community and the service delivery.

SHS-Uminho longitudinal study achieved the "Cátedra de Educación Médica de la Universidad Complutense" award

The award Cátedra de Educación Médica Lilly Foundation - Universidad Complutense de Madrid goal is to "recognize those initiatives that, from different areas, will aim to improve the educational process in its different aspects: the training structure, the process itself, or the results obtained". SHS-Uminho Longitudinal Study achieved the award for the best project at the undergraduate level. This was the first time that the award was delivered to a project in a non-spanish medical school.

The evaluation of student-centeredness of teaching and learning: a new mixed-methods approach

The teaching and learning methods applied in Minho's medical degree were conceived with the explicit aim of achieving student centeredness. The student evaluations collected along the years repeatedly suggested that the school was successful in this intent. However, student evaluations are one of the variables which should be collected to demonstrate student-centeredness. Unfortunately there is no gold standard methodology recommended to demonstrate student centeredness. In 2013-2014, a pilot study was undertaken to develop a feasible evaluation methodology to assess student centeredness of teaching in medical schools (see appendix). The aim of the study was to develop and consider the usefulness of a new mixed-methods approach to evaluate the student-centeredness of teaching and learning on undergraduate medical courses.

Using a case study within Functional and Organic Systems I, the study evaluated student-centeredness by combining a student focus group and 34 hours of classroom observation (to identify the use of theories in practice) with 7 individual teacher interviews (to identify espoused theories). The data were analyzed using the framework of Weimer's 5 characteristics of SCL: "balance of power", "the function of content", "the role of the teacher", "the responsibility for learning" and the "purpose and process of evaluation". The triangulation of our findings from the 3 methods

revealed that the teachers' visions of student-centeredness and their actual teaching were coherent across Weimer's theoretical model. Teachers wanted to enhance student motivation and participation in class, and acted as facilitators of the learning process. The students explicitly referred to teachers as their "guides" or "facilitators" and talked about how it was students' own responsibility to prepare for class and to develop learning. The new mixed-methods approach identified different, but complementary, perspectives of SCL.

Our case study suggests that this new approach (combining classroom observations and interviews to teachers and students) is applicable to other courses in medical education.

Using drawings to capture student misconceptions in science

Innovation in education is one of the genetic traits of the School of Health Sciences. An innovation was published this year in the "Really Good Stuff" section of the journal "Medical Education". In order to capture student misconceptions related to cell biology, we prepared a surprise drawing assignment to begin the first practical class of observation of human cells under the microscope. Asking students to draw as a means of capturing their understanding revealed unexpected and generalized misconceptions the students held about cell structure.

The drawings were analyzed by a group of four cellular anatomy experts. Every student had at least one of the following misconceptions: (i) sketching a tissue-like structure similar to slides with histological sections (20.8%); (ii) issues with scale revealed by drawings of entities too small to be observed in optical microscopy, namely the cell membrane (66.7%), or organelles and cellular structures such as mitochondria and ribosomes (19.2%); (iii) positioning the nucleus bordering the cell membrane (26.1%), as in most textbooks schemes, instead of being approximately in the center of the cell; (iv) making odd representations, such as cilia and flagellum (8.3%), pointy shape (8.3%) or blood cells (2.5%), enzymes (1.7%) or extreme dimension disparities (1.7%). The uncovered misconceptions inform how to improve teaching activities.

Educational papers and presentations in 2013/2014

Papers

- Osório, N. S., Rodrigues, F., Garcia, E. A. and Costa, M. J. (2013), Drawings as snapshots of student cellular anatomy understanding. Medical Education, 47: 1120–1121. (see appendix)
- Magalhães E, A Salgueira, Gonzalez AJ, Costa JJ, Costa MJ, Costa P, Lima MP. (2014). NEO-FFI: Psychometric properties of a short personality inventory in a Portuguese context. Psicologia:Reflexão e Crítica. Psicologia:Reflexão e Crítica 27, 4: 0 - 0.
- Costa P, Alves R, Neto I, Marvão P, Portela M & Costa MJ. (2014) Associations between Medical Student Empathy and Personality: A Multi-Institutional Study. Plos One.,9(3): e89254. (see appendix)
- Costa P, Costa MJ, Neto I, Marvão P, Portela M. (2014) Do personality differences between students from different schools generalize across countries? Med Teach. 36(10):914

- Costa MJ (2014). Self-organized learning environments and the future of student-centered education. Biochemistry and Molecular Biology Education 42(2):160-1.

- Lemos AR, Sandars J, Alves P, Costa MJ. (2014). The evaluation of student-centredness of teaching and learning: a new mixed-methods approach. Int J Med Educ. 5:157-164. (see appendix)

- Henriques L, Salgueira A, Sousa N, Costa MJ. (2014). A experiência de transição para a fase clínica de alunos de medicina detentores de grau prévio: um estudo de caso. FEM 17 (2): 105-113

Oral communications

- Hyland K, Costa MJ, Haramati A & Wilson-Delfosse A (2014). Make your teaching count: Initiatives to elevate the status of the Medical Educator. Symposium presented in Annual Conference of "International association for Medical Education". Milan

- Guimarães D, Costa MJ & Costa P (2014). Factors associated with preference for primary care specialties in undergraduate medical students in Portugal. Oral communication presented in Annual Conference of "International association for Medical Education". Milan

- Salgueira A, Costa P, Gonçalves M, Magalhães E & Costa MJ (2014). Individual characteristics and students' engagement in scientific research. Oral communication presented in Annual Conference of "International association for Medical Education". Milan

- Costa P, Alves R, Neto I, Marvão P, Portela M & Costa MJ (2014). A multi-institutional study on empathy and personality. Oral communication presented in Annual Conference of "International association for Medical Education". Milan

- Neto I, Marvão P, Castelo Branco M, Ponte J, Costa P & Costa MJ (2014). Do personalities of medical students differ across institutions? Oral communication presented in Annual Conference of "International association for Medical Education". Milan

- Palés J, Rodrigues MLV, Amaral E, Sousa N & Costa MJ (2014). Research in Health Education: Opportunities in the Iberoamerican context. Conference workshop presented in Annual Conference of "International association for Medical Education". Milan

- Costa P, Gonçalves G, Cerqueira J & Costa MJ (2014). What scale to use - JSPE or IRI? A case study with Portuguese medical students. Poster presented in Annual Conference of "International association for Medical Education". Milan

- Garcia EA, Pego JM, Costa R, Costa MJ & Volpe FA (2014). Students' perception on observational skills training in medical education: the role of fine art paintings. Poster presented in Annual Conference of "International association for Medical Education". Milan

- Lemos AR, Sandars J, Alves P & Costa MJ (2014). Evaluating the student-centeredness of a programme: A new mixed-methods approach. Poster presented in Annual Conference of "International association for Medical Education". Milan

- Morgado P, Silva AV, Costa P, Costa MJ, Sousa N & Cerqueira J (2014). Depression in Medical Students: Insights from a longitudinal study. Poster presented in Annual Conference of "International association for Medical Education". Milan

- Costa MJ. (2013) Unidades de Educación Médica e Investigación en Educación Médica. Simposium presented in no XXI Congreso de la Sociedad Española de Educación Médica. Madrid

- Neto I, Marvão P & Costa MJ (2013). Os cursos de medicina para licenciados: inovações em Portugal. Oral communication presented in XXI Congreso de la Sociedad Española de Educación Médica. Madrid

- Costa MJ, Herráez A (2013). Simulación de perfiles de proteínas plasmáticas y de isoenzimas de LDH en salud y enfermedad. Oral communication presented in XXI Congreso de la Sociedad Española de Educación Médica. Madrid

- Marvão P, Neto I, Castelo-Branco M, Ponte J, Costa P & Costa MJ (2013). Is personality research biased by missing gender and age? Oral communication presented in XXI Congreso de la Sociedad Española de Educación Médica. Madrid

- Henriques L, Salgueira A & Costa MJ (2013). A qualitative study on the experience of graduate entry students in the transition to clinical training. Oral communication presented in XXI Congreso de la Sociedad Española de Educación Médica. Madrid

- Costa P, Alves R, Neto I, Marvão P & Costa MJ (2013). Associations between empathy of medical students and personality: results from a multi-institutional collaboration. Oral communication presented in XXI Congreso de la Sociedad Española de Educación Médica. Madrid

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8. FINAL WORD

There were very positive results for both the original 6 year and the alternative 4 year graduate entry track of the medical degree. Alike the previous year, the majority of graduate-entry students who performed above the passing score in “Fundamentals of Medicine” were also successful in “Introduction to Clinical Medicine”. In addition, the graduate entry students show personal characteristics and professional expectations that contribute interesting diversity in the population. The School’s innovations were internationally recognized. In summary, the indicators available on the experience of the original track in 2013/2014 demonstrate that the delivery of the program continues to maintain standards of quality in medical education.

Braga, September 2014

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School of Health Sciences
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MASTER IN MEDICINE

University of Minho
School of Health Sciences

APPENDIX

AUTUMN 2014 – A SNAPSHOT

ASSESSMENT OF THE ACADEMIC YEAR 2013/2014 AT THE ENTRANCE OF 2014/2015

Appendix Index

INFORMATION REFERRED IN THE MAIN DOCUMENT

The Snapshot's *Appendix* presents the corresponding academic year's final scores distributions and results of student evaluations, for the curricular units of the undergraduate medical program of the School of Health Sciences of the University of Minho (ECS-UM). A retrospective comparative socio-demographical analysis since 2001 is also included.

Typically, courses' final scores are combinations of scores that result from individual assessments at different points in time, such as modular or end-of-year written tests, skill examinations and attitudinal observations. The curricular unit's assessment methodologies are defined in the first two weeks of the academic year and establish how the different scores are combined to produce the final score for each curricular unit. The boxplots in this *appendix* are computed from the database of the ongoing *Longitudinal Study of the School of Health Sciences of the University of Minho* [1].

As to the student course evaluations, the appendix presents the instruments, the process and the results for the present and former years. The process was designed in 2006 by the Scientific Council of ECS-UM and is under the responsibility of the Medical Education Unit. The process is systematic and originates results that are an important part of the multidimensional internal quality evaluation mechanisms of the ECS-UM's undergraduate medical program.

In addition, the appendix includes descriptive elements about the socio-demography of the entering class of 2013-2014 and a comparison between groups of students since the opening of the medical degree (2001-2002). The information is collected with a survey that students respond to voluntarily during students' first week in the medical school form the data stored in a secure database. Informed consent is collected to collate the data to the *Longitudinal Study of the School of Health Sciences of the University of Minho*.

STUDY PLAN | 2013-2014

Original Track

	SCIENTIFIC AREA	CURRICULAR UNITS		ECTS
1st year	CBB	Introduction to the Medical Degree Course		4
	CBB	Molecules and Cells		24
	CBB	Functional and Organic Systems I		25
	SC-CSH	Training in a Health Centre		1
	SC-CSH	First Aid		1
	CBB / SC-CSH / P / C	Option Project I		4
	SC-CSH	Vertical Domains I		1
			TOTAL	60
2nd year	CBB	Functional and Organic Systems II		26
	CBB	Functional and Organic Systems III		23
	SC-CSH	Family, Society and Health I		4
	CBB / SC-CSH / P / C	Option Project II		6
	SC-CSH	Vertical Domains II		1
			TOTAL	60
3rd year	P	Biopathology and Introduction to Therapeutics		43
	SC-CSH	Introduction to Community Health		4
	C	Introduction to Clinical Medicine		10,5
	SC-CSH	Family, Society and Health II		1,5
	SC-CSH	Vertical Domains III		1
			TOTAL	60
		Degree in Medical Basic Sciences		180
4th year	SC-CSH	Health Centre Residency I		8
	C	Medicine I Residency		17
	C	Maternal and Child Health Residency		17
	C	Clinical Neurosciences		10
	C / P / CBB	From the Clinic to Molecular Biology I		3
	CBB / SC-CSH / P / C	Option Projects III		4
	SC-CSH	Vertical Domains IV		1
			TOTAL	60
5th year	SC-CSH	Health Centre Residency II		13
	C	Surgery Residency		18,5
	C	Medicine II Residency		16
	C	Optional Residencies		8,5
	C / P / CBB	From the Clinic to Molecular Biology II		3
	SC-CSH	Vertical Domains V		1
			TOTAL	60
6th year	SC-CSH	Health Centre Residency - Final Training		10,5
	C	Hospital Residencies - Final Training		39,5
	C / P / CBB	From the Clinic to Molecular Biology III		3
	CBB / SC-CSH / P / C	Option Projects - Final Training		7
		TOTAL		60
		Integrated Master Program in Medicine		360

ECTS - European Credit Transfer Units
C - Clinical; **CBB –** Biological and Biomedical Sciences;
SC-CSH - Community Health, Human and Social Sciences; **P -** Pathology

Alternative Track

	SCIENTIFIC AREA	CURRICULAR UNITS		ECTS
1st year	CBB / SC-CSH / P / C	Various		60
			TOTAL	60
2nd year	CBB / SC-CSH / P / C	Various		60
			TOTAL	60
3rd year	C	Introduction to Clinical Medicine		10,5
	CBB / P	Foundations of Medicine		45
	SC-CSH	Community Health, Human and Social Science		4,5
			TOTAL	60
		Degree in Medical Basic Sciences		180
4th year		The same as the original track		60
		TOTAL		60
5th year		The same as the original track		60
		TOTAL		60
6th year		The same as the original track		60
			TOTAL	60
		Integrated Master Program in Medicine		360

ECTS - European Credit Transfer Units
C - Clinical; CBB –Biological and Biomedical Sciences;
SC-CSH - Community Health, Human and Social Sciences; P - Pathology

STUDENT EVALUATIONS (SE): BRIEF DESCRIPTION OF THE PROCESS

Student evaluations are obtained through a systematic process and uses questionnaires adapted to the ECS-UM approved by the School's Scientific Council in 2006 (summarized in table 1). The questionnaires are administered by the Medical Education Unit (MEU) that also manages the Student Evaluations of Teaching (SET) process and helps facilitate appropriate interpretations of SET figures. The questionnaires are typically applied within the 2 weeks following the end of a curricular unit. The questionnaires are used in Portuguese, therefore translations were developed for the purpose of inclusion in this appendix. There are specific SE forms used for distinct purposes.

"Overall Evaluation": of the general dimensions that all the curricular units should abide to; each student fills one questionnaire/curricular unit; includes the same 12 items (except for specific courses where some items do not apply);

"Evaluation of the Teaching and Learning Methodology": in years 1-3 for all courses that are primarily taught by ECS-UM´s faculty and make use of the methodology of "learning through modules of objectives" adopted by the medical school, each student fills one form/curricular unit; includes 10 items;

"Evaluation of Academic Faculty": on individual ECS-UM's faculty of all curricular units; each student fills one form/faculty - the global scores presented in this snapshot are computed for every faculty of the corresponding curricular unit and the individual scores are communicated to each faculty and the corresponding unit coordinator; includes 8 items;

"Evaluation of Clinical Tutors/Services": on individual clinical tutors in the affiliated Health Care Institutions, applied exclusively to courses with clinical attachments (from the 3rd to the 6th year); each student fills one form/faculty - the global scores presented in this snapshot are computed for every faculty of the corresponding curricular unit and the individual scores are communicated the corresponding unit supervisor; includes 10 items;

"Evaluation of Option Projects": used on all the elective curricular units of the medical degree; includes 8 items.

Items for the Overall Evaluation

Curricular Unit (nuclear items)

1	I understood the learning objectives
2	The contents were delivered in accordance with the learning objectives
3	I have gained/developed abilities that I consider useful
4	The workload was appropriate to the time available for learning
5	The assessment process was coherent with the objectives
6	I was appropriately supervised in my learning process
7	The activities were well organized
8	The available resources were appropriate
9	My previous training prepared me adequately for this curricular unit
10	Globally, I consider the faculty is excellent
11	Globally, I consider the curricular unit is excellent
12	Globally, the curricular unit promoted my personal development

First Aid (nuclear items)

1	I understood the learning objectives
2	The contents were delivered in accordance with the learning objectives
3	I have gained/developed abilities that I consider useful
4	The workload was appropriate to the time available for learning
5	The assessment process was coherent with the objectives
6	I was appropriately supervised in my learning process
7	The activities were well organized
8	The available resources were appropriate
9	I have been provided with a sufficient number of activities to practice skills
10	My previous training prepared me adequately for this curricular unit
11	Globally, I consider the curricular unit is excellent
12	Globally, the curricular unit promoted my personal development
13	I am prepared to provide first aid care in case of need

Items for the Evaluation of the Teaching and Learning Methodology in years 1-3

Phase 1	**1**	Contributed to clarify the objectives
	2	Allowed the reactivation of prior knowledge
Phase 2	**3**	The time provided was sufficient
	4	The activities were important to the learning process
Phase 3	**5**	I was stimulated to share what I learned
	6	Provided an opportunity for a self-assessment relatively to the learning objectives
Phase 4	**7**	Contributed to overcome some of my previously identified learning gaps
	8	The faculty were available
Phase 5	**9**	The time provided to complete the examinations was appropriate
	10	The examinations reflected the learning objectives

Items for the Evaluation of Faculty

Faculty	
1	The faculty is knowledgeable in the concepts and phenomena implied in the learning objectives
2	The faculty arrives on time
3	The faculty aids in the identification, analysis and understanding of the learning objectives
4	The faculty orients the development of learning
5	The faculty stimulates and fosters critical thinking
6	The faculty motivates towards the fulfillment of learning objectives
7	The faculty helps in the synthesis and integration of knowledge
8	Overall, this faculty is excellent

Items for the Evaluation of Clinical Tutors/Services

Tutors/Services	
1	I had access to all the service components (e.g.: meetings, visits, examinations, etc.)
2	I was stimulated to share my ideas, knowledge and doubts
3	The tutor was available to answer questions and to clarify uncertainties
4	The tutors' explanations were clear and organized
5	The tutor promoted contacts with patients with different pathologies
6	The tutor helped me to perform clinical procedures effectively
7	The tutor was knowledgeable the concepts, phenomena and clinical practices
8	I received appropriate supervision at the clinical settings
9	I rate this tutor as excellent
10	What I've learned in this service was useful

Items for the Evaluation of Clinical Tutors/Services (Optional Residencies)

Tutors/Services	
1	The tutor was available to answer questions and to clarify uncertainties
2	The tutors' explanations were clear and organized
3	The tutor was knowledgeable the concepts, phenomena and clinical practices
4	I received appropriate supervision at the clinical settings
5	I rate this tutor as excellent
6	What I've learned in this service was useful

Items for the Evaluation of Option Projects

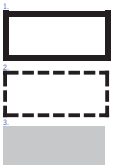
1	I understood the learning objectives
2	The elements of the assessment process reflect the objectives of the curricular unit
3	The assessment process was coherent with the objectives of the curricular unit
4	The evaluation parameters were defined in time
5	The workload was appropriate to the credit units
6	I would have developed this project, even if it was not compulsory
7	Globally, I learned a lot from this curricular unit
8	Globally, I consider this curricular unit excellent

Scale

Completely disagree	①
Strongly disagree	②
Disagree	③
Agree	④
Strongly agree	⑤
Completely agree	⑥
Without an opinion	⓪

Legend

- <u>for tutors, faculty and curricular unit assessment:</u>



Question with highest % of favorable responses

Question with lowest % of favorable responses

Question with less than 50% of favorable responses

Results Index

DISTRIBUTION OF STUDENT SCORES

As this snapshot is issued in July and there as there is a "Special season" for examination in the university of Minho, the figures included may change marginally in this year final records.

According to the University regulations, failures include:

- Non attendants: students with less than 2/3rds of class attendance; they fail accordingly to the University's regulation.
- Academic failing students: students who attended at least 2/3rds of classes; failure results from not complying to pass/fail for academic criteria.

STUDENT EVALUATIONS

As referred in the main document, student's response rate dropped significantly in 2013/14. The school is presently exploring other alternatives for the next curricular year. For more information see the specific report on the subject, available at the Medical Education Unit.

STUDENT EVALUATIONS: RESPONSE RATES BY CURRICULAR UNIT

Curricular Unit	Curricular Year	Number of editions	Nuclear questions	Method questions	Specific questions	Number of students enrolled	Response rate (%)
Introduction to the Medical Degree Course	1	13	X	X	X	120	62
Molecules and Cells	1	13	X	X	X	120	53
Functional and Organic Systems I	1	13	X	X	X	147	16
Training in a Health Centre	1	13	X		X	120	48
First Aid	1	13	X		X	115	91
Option Project I	1	13			X	120	69
Vertical Domains I	1	10	X		X	111	77
Family, Society and Health I	2	4	X			121	14
Functional and Organic Systems II	2	12	X	X	X	145	17
Functional and Organic Systems III	2	12	X	X	X	143	11
Option Project II	2	12			X	127	76
Vertical Domains II	2	10	X		X	122	77
Biopathology and Introduction to Therapeutics	3	11	X	X	X	121	26
Introduction to Community Health	3	11	X	X	X	115	25
Family, Society and Health II	3	3	X		X	122	15
Vertical Domains III	3	10	X		X	116	94
Foundations of Medicine	3PA	3	X		X	22	32
Community Health, Human and Social Science	3PA	3	X		X	16	6
Introduction to Clinical Medicine	3/3PA	11	X		X	145	88
Medicine I Residency	4	10	X			169	51*
Clinical Neurosciences	4	4	X			171	50*
Health Centre Residency I	4	10	X			144	53
Maternal and Child Health Residency	4	10	X			151	38
From the Clinic to Molecular Biology I	4	10	X			150	37
Option Projects III	4	5			X	150	83
Vertical Domains IV	4	10	X		X	154	83
Surgery Residency	5	9	X			140	37
Medicine II Residency	5	9	X			142	33
Optional Residencies	5	9	X		X	128	85
Health Centre Residency II	5	9	X			128	41
From the Clinic to Molecular Biology II	5	9	X			130	24
Vertical Domains V	5	9	X		X	129	85
Hospital Residencies	6	8	X			101	14
Health Centre Residency - Final Training	6	8	X			101	22
From the Clinic to Molecular Biology III	6	8	X			108	24
Option Projects - Final Training	6	8			X	101	83

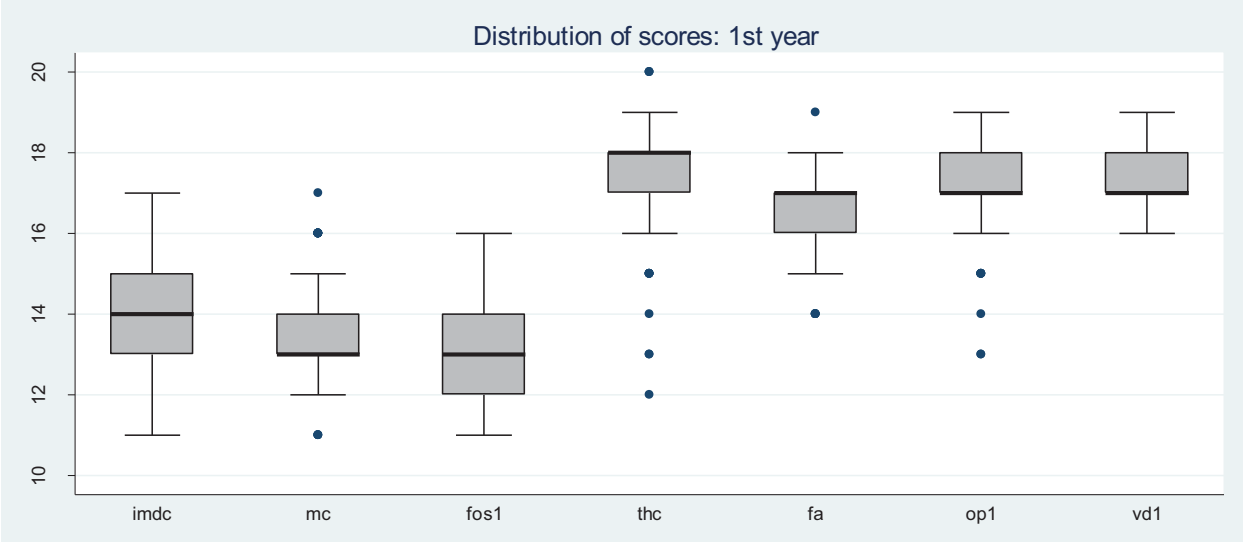
* The 10 students from Aveiro did not receive the survey as their official records were not up to date in the central system.

1ST YEAR

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
1st year	CBB	Introduction to the Medical Degree Course	4	✓
	CBB	Molecules and Cells	24	✓
	CBB	Functional and Organic Systems I	25	✓
	SC-CSH	Training in a Health Centre	1	✓
	SC-CSH	First Aid	1	✓
	CBB / SC-CSH / P / C	Option Project I	4	✓
	SC-CSH	Vertical Domains I	1	✓
		TOTAL	60	

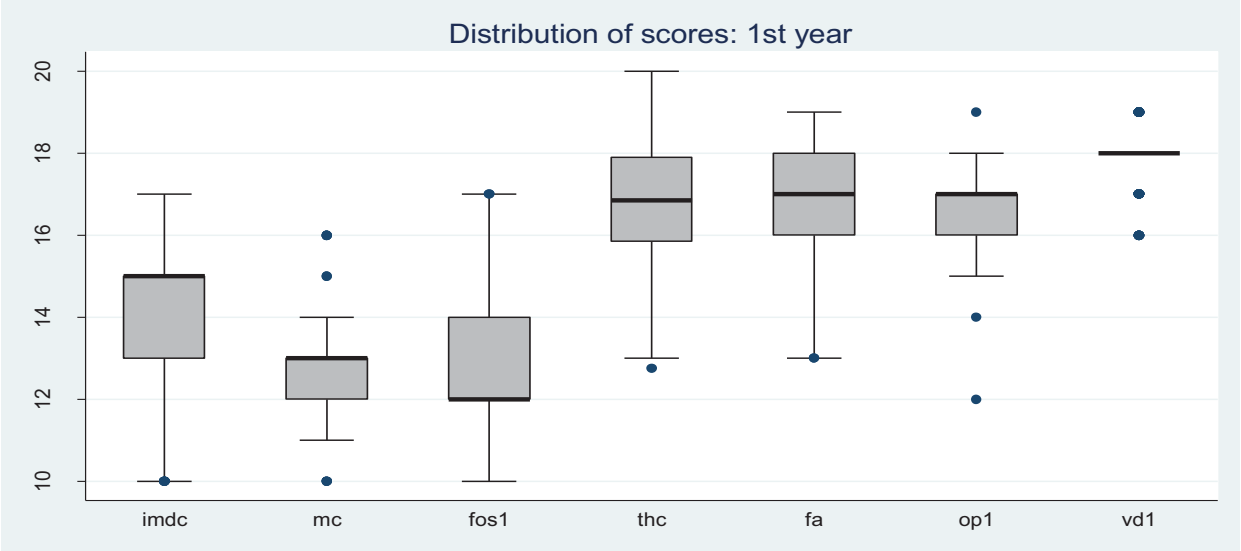
Distribution of Student Scores(*)

2012-2013



Failure	12 (9%)	13 (9%)	39 (27%)	8 (7%)	7 (6%)	8 (6%)	5 (4%)

2013-2014



Failure	17 (14%)	19 (16%)	43 (30%)	9 (8%)	13 (11%)	12 (10%)	5 (5%)

Legend
IMDC – Introduction to the Medical Degree Course
MC – Molecules and Cells
FOS1 – Functional and Organic Systems I
THC – Training in a Health Centre
FA – First Aid
OP1 – Option Project I
VD1 – Vertical Domains I

(*) Output provided by the database of ECS-UM Longitudinal Study

Curricular Unit: **Introduction to the Medical Degree**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	3	0	0	1	0	0	0	3	3	0	1	0
	Strongly disagree	3	5	7	4	4	4	3	1	4	7	22	9
	Disagree	15	19	14	9	24	18	16	19	22	20	20	16
	Unfavorable responses	**20**	**24**	**20**	**15**	**28**	**22**	**19**	**23**	**28**	**27**	**43**	**26**
	Agree	38	42	46	50	39	38	42	41	31	39	32	43
	Strongly agree	27	22	18	20	20	23	27	19	20	18	9	16
	Completely agree	15	12	15	14	11	18	8	16	15	14	11	8
	Favorable responses	**80**	**76**	**78**	**84**	**70**	**78**	**77**	**76**	**66**	**70**	**53**	**68**
	No opinion	0	0	1	1	1	0	4	1	5	3	4	7
2012/2013	**Unfavorable responses**	**8**	**14**	**12**	**16**	**8**	**7**	**10**	**14**	**22**	**8**	**33**	**18**
	Favorable responses	**91**	**83**	**87**	**82**	**89**	**90**	**87**	**83**	**74**	**90**	**65**	**75**
	No opinion	2	3	2	3	3	3	3	3	4	2	3	7

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	4	4	1	1	0	0	4	1	0	0
	Strongly disagree	1	4	5	8	5	4	4	3	1	9
	Disagree	16	16	19	22	12	18	7	4	8	16
	Unfavorable responses	**22**	**24**	**26**	**31**	**18**	**22**	**15**	**8**	**9**	**26**
	Agree	42	47	39	41	39	34	28	23	23	38
	Strongly agree	26	22	19	19	22	26	8	15	24	18
	Completely agree	9	7	14	9	18	15	12	22	43	18
	Favorable responses	**77**	**76**	**72**	**69**	**78**	**74**	**49**	**59**	**91**	**73**
	No opinion	1	0	3	0	4	4	36	32	0	1
2012/2013	**Unfavorable responses**	**9**	**8**	**24**	**20**	**13**	**15**	**7**	**1**	**27**	**12**
	Favorable responses	**88**	**88**	**73**	**78**	**83**	**83**	**58**	**73**	**72**	**87**
	No opinion	3	3	3	3	3	3	35	27	2	2

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	1	1	1	1	1	1
	Strongly disagree	1	0	2	2	1	1	2	1
	Disagree	3	2	6	9	8	6	8	9
	Unfavorable responses	**5**	**3**	**9**	**11**	**9**	**8**	**10**	**11**
	Agree	18	17	29	30	32	35	31	30
	Strongly agree	33	26	33	30	29	28	30	27
	Completely agree	42	50	26	26	26	27	26	27
	Favorable responses	**92**	**94**	**88**	**86**	**87**	**90**	**87**	**85**
	No opinion	3	4	3	3	4	3	3	4
2012/2013	**Unfavorable responses**	**2**	**2**	**6**	**7**	**7**	**6**	**7**	**7**
	Favorable responses	**95**	**95**	**91**	**90**	**90**	**91**	**90**	**89**
	No opinion	3	3	3	3	3	3	3	4

Curricular Unit: **Molecules and Cells**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	2	3	2	2	0	2	0	2	2	2
	Strongly disagree	2	3	2	5	9	5	8	3	3	6	8	6
	Disagree	8	11	8	19	22	6	17	14	28	17	16	11
	Unfavorable responses	**9**	**14**	**11**	**27**	**33**	**13**	**25**	**19**	**31**	**25**	**25**	**19**
	Agree	41	34	38	38	31	41	39	39	31	33	45	42
	Strongly agree	38	34	38	27	27	27	25	23	22	31	19	23
	Completely agree	13	17	14	8	9	17	9	17	11	9	9	14
	Favorable responses	**91**	**86**	**89**	**72**	**67**	**84**	**73**	**80**	**64**	**73**	**73**	**80**
	No opinion	0	0	0	2	0	3	2	2	5	2	2	2
2012/2013	**Unfavorable responses**	**5**	**5**	**3**	**14**	**13**	**7**	**14**	**7**	**17**	**13**	**16**	**16**
	Favorable responses	**95**	**93**	**97**	**84**	**86**	**92**	**84**	**90**	**81**	**87**	**84**	**84**
	No opinion	0	2	0	2	1	1	2	3	1	0	0	0

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	2	0	6	6	2	0	3	0	0	0
	Strongly disagree	3	5	5	9	3	3	0	2	0	9
	Disagree	5	13	19	23	9	9	8	3	9	20
	Unfavorable responses	**9**	**17**	**30**	**39**	**14**	**13**	**11**	**5**	**9**	**30**
	Agree	30	34	30	27	31	28	27	27	30	34
	Strongly agree	41	36	25	22	28	39	19	16	23	25
	Completely agree	20	13	14	11	25	20	6	19	38	11
	Favorable responses	**91**	**83**	**69**	**59**	**84**	**88**	**52**	**61**	**91**	**70**
	No opinion	0	0	2	2	2	0	38	34	0	0
2012/2013	**Unfavorable responses**	**5**	**6**	**19**	**24**	**8**	**10**	**9**	**2**	**2**	**12**
	Favorable responses	**92**	**91**	**79**	**73**	**90**	**87**	**64**	**76**	**98**	**88**
	No opinion	3	3	2	2	2	2	27	22	0	0

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	1	1	1	1	1	1
	Strongly disagree	0	0		1	1	1	1	1
	Disagree	4	2	7	8	9	9	7	7
	Unfavorable responses	**5**	**3**	**8**	**10**	**11**	**11**	**8**	**9**
	Agree	24	26	32	34	37	36	35	35
	Strongly agree	33	27	35	32	26	28	31	33
	Completely agree	36	41	23	22	22	22	24	21
	Favorable responses	**94**	**95**	**91**	**88**	**86**	**86**	**90**	**88**
	No opinion	1	3	2	2	3	3	2	2
2012/2013	**Unfavorable responses**	**7**	**5**	**9**	**10**	**11**	**10**	**9**	**10**
	Favorable responses	**89**	**91**	**88**	**87**	**86**	**87**	**88**	**87**
	No opinion	3	3	3	3	3	3	3	4

Curricular Unit: **Functional and Organic Systems I**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	4	0	0	0	0	0	0	0
	Strongly disagree	0	0	0	17	4	4	0	4	4	0	0	0
	Disagree	0	4	0	30	13	4	9	9	22	4	4	0
	Unfavorable responses	**0**	**4**	**0**	**48**	**22**	**9**	**9**	**13**	**26**	**4**	**4**	**0**
	Agree	35	39	17	39	39	39	57	35	30	48	43	43
	Strongly agree	48	48	57	9	26	48	30	35	43	30	30	35
	Completely agree	17	4	26	0	9	0	0	17	0	13	22	22
	Favorable responses	**100**	**91**	**100**	**48**	**74**	**87**	**87**	**87**	**74**	**91**	**96**	**100**
	No opinion	0	4	0	4	4	4	4	0	0	4	0	0
2012/2013	**Unfavorable responses**	**5**	**13**	**5**	**30**	**20**	**13**	**17**	**8**	**22**	**13**	**12**	**7**
	Favorable responses	**95**	**87**	**95**	**70**	**80**	**87**	**83**	**92**	**73**	**87**	**88**	**93**
	No opinion	0	0	0	0	0	0	0	0	5	0	0	0

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	4	4	9	0	0	0	0	0	0	0
	Strongly disagree	0	9	4	9	0	0	0	0	0	0
	Disagree	13	17	26	4	4	13	4	0	0	17
	Unfavorable responses	**17**	**30**	**39**	**13**	**4**	**13**	**4**	**0**	**0**	**17**
	Agree	39	30	35	30	30	22	13	13	13	43
	Strongly agree	22	22	13	35	35	35	17	17	26	30
	Completely agree	17	9	9	17	26	26	4	13	61	9
	Favorable responses	**78**	**61**	**57**	**83**	**91**	**83**	**35**	**43**	**100**	**83**
	No opinion	4	9	4	4	4	4	61	57	0	0
2012/2013	**Unfavorable responses**	**8**	**20**	**28**	**5**	**10**	**5**	**3**	**2**	**2**	**23**
	Favorable responses	**90**	**78**	**72**	**95**	**88**	**93**	**55**	**58**	**98**	**75**
	No opinion	2	2	0	0	2	2	42	40	0	2

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	0	0	0	0	0	0
	Strongly disagree	0	0	0	1	0	1	1	0
	Disagree	2	2	5	6	4	5	6	5
	Unfavorable responses	**2**	**2**	**5**	**6**	**4**	**6**	**7**	**5**
	Agree	32	34	42	41	43	42	38	38
	Strongly agree	36	34	33	33	32	32	33	33
	Completely agree	23	23	14	12	14	13	15	16
	Favorable responses	**91**	**91**	**88**	**86**	**89**	**87**	**86**	**88**
	No opinion	7	7	7	7	7	7	7	7
2012/2013	**Unfavorable responses**	**4**	**3**	**6**	**6**	**6**	**8**	**6**	**6**
	Favorable responses	**96**	**96**	**93**	**93**	**93**	**91**	**93**	**92**
	No opinion	1	1	1	1	1	1	1	2

Curricular Unit: **Training in a Health Centre**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	-	0	0	0	0	0	-	-	0	0
	Strongly disagree	0	0	-	2	0	0	0	0	-	-	0	0
	Disagree	0	0	-	2	2	4	0	0	-	-	0	0
	Unfavorable responses	**0**	**0**	**-**	**4**	**2**	**4**	**0**	**0**	**-**	**-**	**0**	**0**
	Agree	9	7	-	7	7	11	13	11	-	-	6	4
	Strongly agree	24	28	-	26	26	15	30	26	-	-	30	24
	Completely agree	67	65	-	63	61	70	57	61	-	-	64	72
	Favorable responses	**100**	**100**	**-**	**96**	**94**	**96**	**100**	**98**	**-**	**-**	**100**	**100**
	No opinion	0	0	-	0	4	0	0	2	-	-	0	0
2012/2013	**Unfavorable responses**	**4**	**3**	**-**	**20**	**5**	**13**	**21**	**10**	**-**	**-**	**9**	**3**
	Favorable responses	**96**	**96**	**-**	**80**	**89**	**86**	**79**	**89**	**-**	**-**	**89**	**96**
	No opinion	1	1	-	0	5	1	1	1	-	-	2	1

Curricular Unit: **First Aid**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12	13
2013/2014	Completely disagree	0	0	0	0	0	0	0	2	3	-	0	0	0
	Strongly disagree	0	3	0	0	1	0	1	3	0	-	0	0	0
	Disagree	2	1	0	2	4	1	1	0	7	-	1	0	2
	Unfavorable responses	**2**	**4**	**0**	**2**	**5**	**1**	**2**	**5**	**10**	**-**	**1**	**0**	**2**
	Agree	5	9	3	9	13	5	11	12	19	-	6	3	5
	Strongly agree	49	38	28	43	39	37	36	36	35	-	35	28	49
	Completely agree	45	49	69	45	38	58	51	48	29		58	69	45
	Favorable responses	**98**	**95**	**100**	**97**	**90**	**99**	**98**	**95**	**83**	**-**	**99**	**100**	**98**
	No opinion	0	1	0	1	5	0	0	0	6	-	0	0	0
2012/2013	**Unfavorable responses**	**0**	**0**	**1**	**4**	**2**	**2**	**1**	**1**	**4**	**10**	**0**	**1**	**2**
	Favorable responses	**99**	**99**	**98**	**95**	**97**	**97**	**98**	**98**	**95**	**86**	**99**	**97**	**97**
	No opinion	1	1	1	1	1	1	1	1	1	4	1	2	1

Curricular Unit: **Option Project I**

Overall Evaluation

Curricular Unit		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	0	0	3	0	0	0
	Strongly disagree	0	0	0	0	3	0	0	0
	Disagree	0	4	4	1	9	17	0	0
	Unfavorable responses	**0**	**4**	**4**	**1**	**14**	**17**	**0**	**0**
	Agree	20	18	25	24	36	20	12	19
	Strongly agree	39	42	46	40	30	34	42	43
	Completely agree	39	25	19	34	19	24	46	37
	Favorable responses	**98**	**86**	**90**	**98**	**85**	**78**	**100**	**100**
	No opinion	2	11	6	1	1	5	0	0
2012/2013	**Unfavorable responses**	**0**	**2**	**2**	**4**	**11**	**5**	**0**	**0**
	Favorable responses	**100**	**97**	**97**	**95**	**89**	**95**	**100**	**100**
	No opinion	0	2	1	1	0	0	0	0

Curricular Unit: **Vertical Domains I**

Overall Evaluation

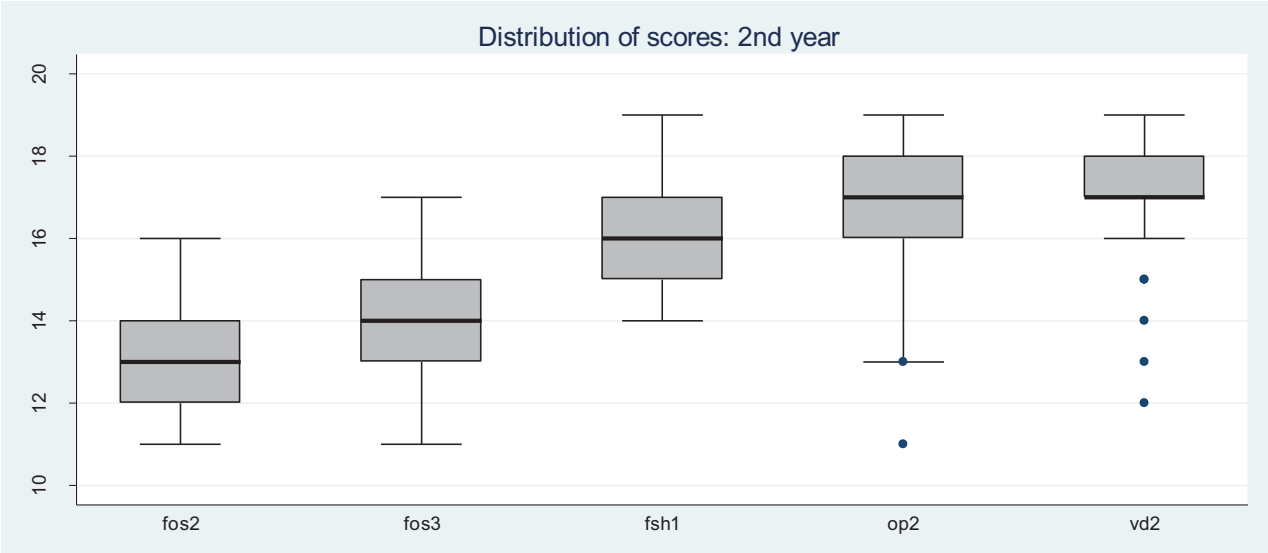
Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	0	–	0	0	2	–	0	0
	Strongly disagree	2	0	2	1	0	–	0	0	2	–	1	4
	Disagree	2	4	7	12	6	–	2	2	20	–	4	9
	Unfavorable responses	**5**	**4**	**10**	**13**	**6**	**–**	**2**	**2**	**25**	**–**	**5**	**13**
	Agree	36	33	39	38	35	–	36	39	27	–	31	38
	Strongly agree	29	36	30	32	33	–	42	39	29	–	38	36
	Completely agree	27	25	20	16	11	–	20	18	10	–	26	12
	Favorable responses	**93**	**94**	**89**	**86**	**79**	**–**	**98**	**95**	**65**	**–**	**95**	**86**
	No opinion	2	2	1	1	15	–	0	2	10	–	0	1
2012/2013	**Unfavorable responses**	**8**	**5**	**6**	**8**	**3**	**-**	**7**	**6**	**12**	**-**	**7**	**10**
	Favorable responses	**92**	**95**	**94**	**92**	**92**	**-**	**93**	**94**	**85**	**-**	**93**	**88**
	No opinion	0	0	0	0	5	-	0	0	4	-	0	2

2ND YEAR

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
2nd year	CBB	Functional and Organic Systems II	26	✓
	CBB	Functional and Organic Systems III	23	✓
	SC-CSH	Family, Society and Health I	4	✓
	CBB / SC-CSH / P / C	Option Project II	6	✓
	SC-CSH	Vertical Domains II	1	✓
		TOTAL	60	

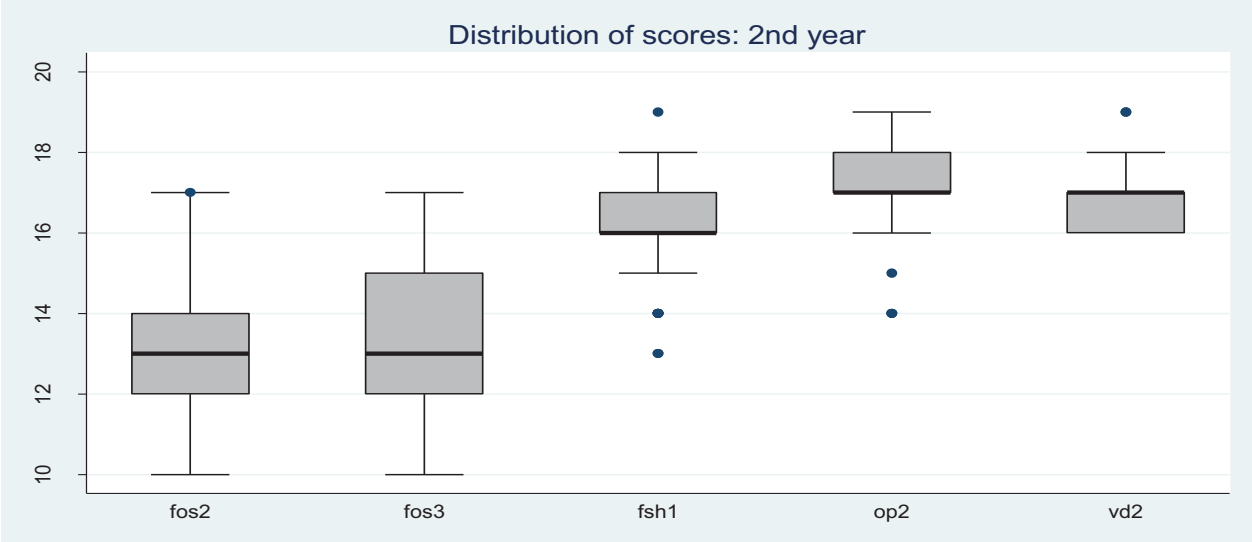
Distribution of Student Scores(*)

2012-2013



Failure	28 (20%)	25 (20%)	14 (11%)	12 (10%)	7 (6%)

2013-2014



Failure	10 (7%)	15 (10%)	4(3%)	8 (6%)	6 (5%)

Legend
FOS2 – Functional and Organic Systems II
FOS3 – Functional and Organic Systems III
FSH1 – Family, Society and Health I
OP2 – Option Project II
VD2 – Vertical Domains II

(*) Output provided by the database of ECS-UM Longitudinal Study.

Curricular Unit: **Functional and Organic Systems II**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	8	0	0	0	4	4	4	0
	Strongly disagree	0	4	0	8	0	4	4	4	0	0	4	8
	Disagree	4	20	4	16	8	8	8	20	12	4	0	0
	Unfavorable responses	**4**	**24**	**4**	**24**	**16**	**12**	**12**	**24**	**16**	**8**	**8**	**8**
	Agree	36	28	28	40	44	28	48	32	48	44	32	28
	Strongly agree	36	24	40	24	28	36	28	32	20	36	40	36
	Completely agree	20	20	24	8	8	20	8	8	12	8	16	24
	Favorable responses	**92**	**72**	**92**	**72**	**80**	**84**	**84**	**72**	**80**	**88**	**88**	**88**
	No opinion	4	4	4	4	4	4	4	4	4	4	4	4
2012/2013	**Unfavorable responses**	**2**	**16**	**3**	**40**	**26**	**11**	**15**	**7**	**24**	**14**	**15**	**5**
	Favorable responses	**96**	**81**	**95**	**57**	**71**	**85**	**82**	**90**	**72**	**82**	**82**	**93**
	No opinion	2	3	2	3	3	3	3	3	4	4	3	2

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	0	4	0	0	0	0	0	4	4	8
	Strongly disagree	4	8	0	0	8	8	0	0	0	0
	Disagree	16	28	12	16	0	0	0	0	4	12
	Unfavorable responses	**20**	**40**	**12**	**16**	**8**	**8**	**0**	**4**	**8**	**20**
	Agree	44	32	48	44	32	28	24	12	16	44
	Strongly agree	16	16	24	28	36	24	16	8	32	28
	Completely agree	16	8	12	8	16	32	0	16	40	4
	Favorable responses	**76**	**56**	**84**	**80**	**84**	**84**	**40**	**36**	**88**	**76**
	No opinion	4	4	4	4	8	8	60	60	4	4
2012/2013	**Unfavorable responses**	**25**	**38**	**27**	**8**	**11**	**4**	**3**	**3**	**4**	**35**
	Favorable responses	**96**	**81**	**95**	**57**	**71**	**85**	**82**	**90**	**72**	**82**
	No opinion	2	3	2	3	3	3	3	3	4	4

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	1	0	1	1	1	1	1	1
	Strongly disagree	0	0	0	1	1	1	1	1
	Disagree	3	3	4	5	5	5	4	5
	Unfavorable responses	**3**	**3**	**5**	**7**	**7**	**7**	**6**	**6**
	Agree	19	20	24	27	27	28	26	27
	Strongly agree	28	29	28	24	23	21	22	23
	Completely agree	38	36	31	30	32	32	34	33
	Favorable responses	**86**	**85**	**83**	**82**	**82**	**81**	**82**	**82**
	No opinion	11	12	12	11	12	12	12	12
2012/2013	**Unfavorable responses**	**4**	**2**	**7**	**8**	**7**	**8**	**7**	**6**
	Favorable responses	**94**	**96**	**91**	**90**	**91**	**90**	**91**	**91**
	No opinion	2	2	2	2	2	2	2	3

Curricular Unit: **Functional and Organic Systems III**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	0	6	6	6	0	0	0	0
	Strongly disagree	0	0	0	0	0	0	0	0	6	6	6	0
	Disagree	0	6	0	13	6	0	13	0	25	0	6	0
	Unfavorable responses	**0**	**6**	**0**	**13**	**6**	**6**	**19**	**6**	**31**	**6**	**13**	**0**
	Agree	50	63	38	63	63	63	50	63	50	56	56	56
	Strongly agree	44	31	56	25	31	25	31	19	19	25	31	38
	Completely agree	6	0	6	0	0	6	0	13	0	13	0	6
	Favorable responses	**100**	**94**	**100**	**88**	**94**	**94**	**81**	**94**	**69**	**94**	**88**	**100**
	No opinion	0	0	0	0	0	0	0	0	0	0	0	0
2012/2013	**Unfavorable responses**	**7**	**30**	**3**	**26**	**46**	**19**	**41**	**20**	**23**	**27**	**29**	**16**
	Favorable responses	**93**	**70**	**97**	**74**	**53**	**81**	**59**	**80**	**73**	**69**	**69**	**83**
	No opinion	0	0	0	0	1	0	0	0	4	4	3	1

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	6	13	0	0	6	0	0	0	0	0
	Strongly disagree	6	6	0	0	6	0	0	0	0	0
	Disagree	25	19	13	6	6	6	0	0	0	13
	Unfavorable responses	**38**	**38**	**13**	**6**	**19**	**6**	**0**	**0**	**0**	**13**
	Agree	25	38	50	69	38	31	6	6	31	50
	Strongly agree	25	13	19	13	31	38	13	13	25	19
	Completely agree	13	13	19	13	13	25	13	19	44	19
	Favorable responses	**63**	**63**	**88**	**94**	**81**	**94**	**31**	**38**	**100**	**88**
	No opinion	0	0	0	0	0	0	69	63	0	0
2012/2013	**Unfavorable responses**	**34**	**39**	**27**	**24**	**24**	**20**	**11**	**10**	**3**	**53**
	Favorable responses	**66**	**61**	**73**	**76**	**73**	**77**	**36**	**39**	**97**	**47**
	No opinion	0	0	0	0	3	3	53	51	0	0

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	1	2	1	1	1	1	1	1
	Strongly disagree	1	1	1	0	1	1	2	1
	Disagree	4	3	4	6	6	5	6	6
	Unfavorable responses	**6**	**6**	**6**	**8**	**8**	**7**	**9**	**9**
	Agree	22	35	30	36	28	30	35	33
	Strongly agree	35	24	33	22	29	29	21	23
	Completely agree	32	30	26	30	30	29	30	30
	Favorable responses	**89**	**89**	**89**	**87**	**87**	**88**	**86**	**86**
	No opinion	5	5	5	5	5	5	5	5
2012/2013	**Unfavorable responses**	**6**	**5**	**10**	**11**	**10**	**11**	**10**	**9**
	Favorable responses	**93**	**94**	**89**	**88**	**89**	**88**	**89**	**86**
	No opinion	1	1	1	1	1	1	1	5

Curricular Unit: **Family, Society and Health I**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	6	0	0	0	0	0	0	0
	Strongly disagree	0	0	0	0	6	0	0	0	0	0	0	0
	Disagree	0	0	0	6	0	0	6	0	6	12	12	0
	Unfavorable responses	**0**	**0**	**0**	**6**	**12**	**0**	**6**	**0**	**6**	**12**	**12**	**0**
	Agree	18	12	12	35	41	35	41	24	47	29	41	12
	Strongly agree	53	65	65	35	29	41	35	65	18	47	35	65
	Completely agree	29	24	24	24	18	24	18	12	18	12	12	24
	Favorable responses	**100**	**100**	**100**	**94**	**88**	**100**	**94**	**100**	**82**	**88**	**88**	**100**
	No opinion	0	0	0	0	0	0	0	0	12	0	0	0
2012/2013	**Unfavorable responses**	**3**	**3**	**2**	**7**	**14**	**7**	**15**	**5**	**10**	**3**	**5**	**3**
	Favorable responses	**95**	**95**	**97**	**92**	**83**	**92**	**83**	**93**	**78**	**92**	**92**	**95**
	No opinion	2	2	2	2	3	2	2	2	12	5	3	2

Curricular Unit: **Option Project II**

Overall Evaluation

Curricular Unit (specific items)		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	0	2	0	1	1	0
	Strongly disagree	0	1	1	5	5	0	0	0
	Disagree	2	4	3	8	5	5	1	2
	Unfavorable responses	**2**	**5**	**4**	**15**	**11**	**6**	**2**	**2**
	Agree	14	23	25	19	34	20	12	15
	Strongly agree	31	36	42	35	30	28	33	34
	Completely agree	53	33	27	28	26	44	54	48
	Favorable responses	**98**	**93**	**94**	**83**	**89**	**93**	**98**	**97**
	No opinion	0	2	2	2	0	1	0	1
2012/2013	**Unfavorable responses**	**3**	**2**	**3**	**17**	**26**	**7**	**1**	**6**
	Favorable responses	**97**	**96**	**96**	**81**	**73**	**89**	**99**	**92**
	No opinion	0	2	1	2	1	4	0	2

Curricular Unit: **Vertical Domains II**

Overall Evaluation

Curricular Unit (nuclear items)		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
2013/2014	Completely disagree	1	0	1	1	0	–	1	1	2	–	2	4
	Strongly disagree	2	2	2	3	2	–	2	2	2	–	1	4
	Disagree	3	4	13	13	6	–	10	7	15	–	5	18
	Unfavorable responses	**6**	**6**	**16**	**17**	**9**	**–**	**13**	**11**	**19**	**–**	**9**	**27**
	Agree	31	37	38	32	38	–	44	41	37	–	43	39
	Strongly agree	34	34	26	26	29	–	25	31	28	–	33	24
	Completely agree	29	20	19	23	18	–	17	16	11	–	16	11
	Favorable responses	**94**	**91**	**83**	**81**	**85**	**–**	**86**	**88**	**76**	**–**	**91**	**73**
	No opinion	0	2	1	2	6	–	1	1	5	–	0	0
2012/2013	**Unfavorable responses**	**9**	**10**	**14**	**14**	**9**	**-**	**13**	**9**	**11**	**-**	**10**	**16**
	Favorable responses	**91**	**87**	**85**	**85**	**84**	**-**	**86**	**88**	**84**	**-**	**90**	**81**
	No opinion	0	3	1	1	8	-	1	3	4	-	0	2

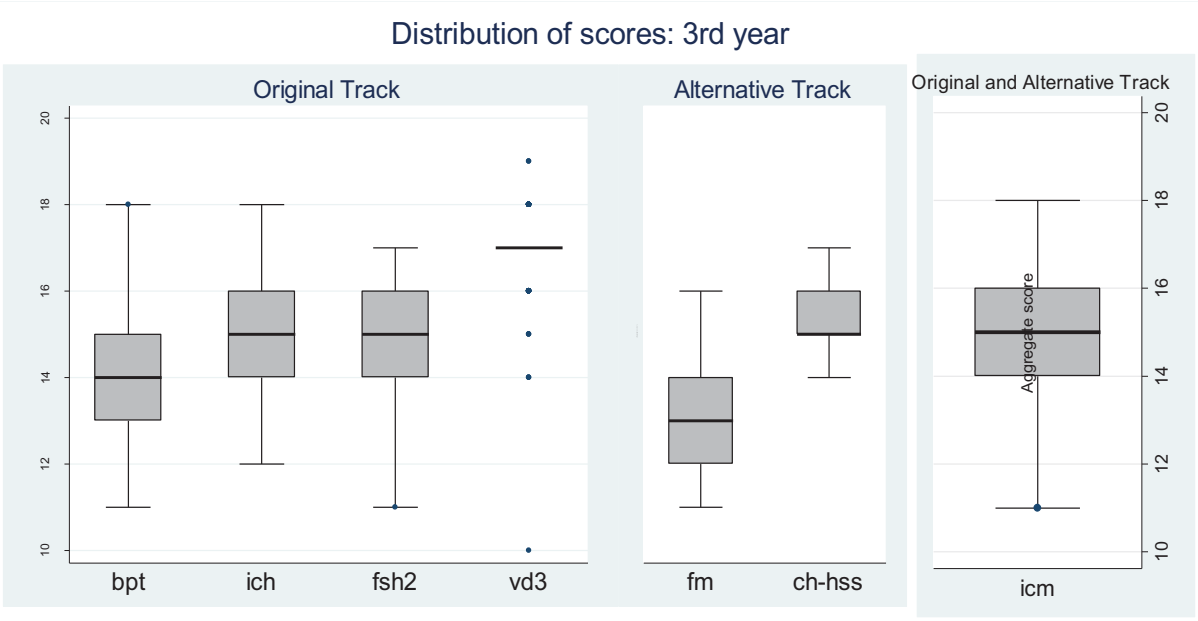
3RD YEAR

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
3rd year	P	Biopathology and Introduction to Therapeutics	43	✓
	SC-CSH	Introduction to Community Health	4	✓
	C	Introduction to Clinical Medicine	10,5	✓
	SC-CSH	Family, Society and Health II	1,5	✓
	SC-CSH	Vertical Domains III	1	✓
		TOTAL	60	

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
3rd year Alternative Track	C	Introduction to Clinical Medicine	10,5	✓
	CBB / P	Foundations of Medicine	45	✓
	SC-CSH	Community Health, Human and Social Science	4,5	✓
		TOTAL	60	

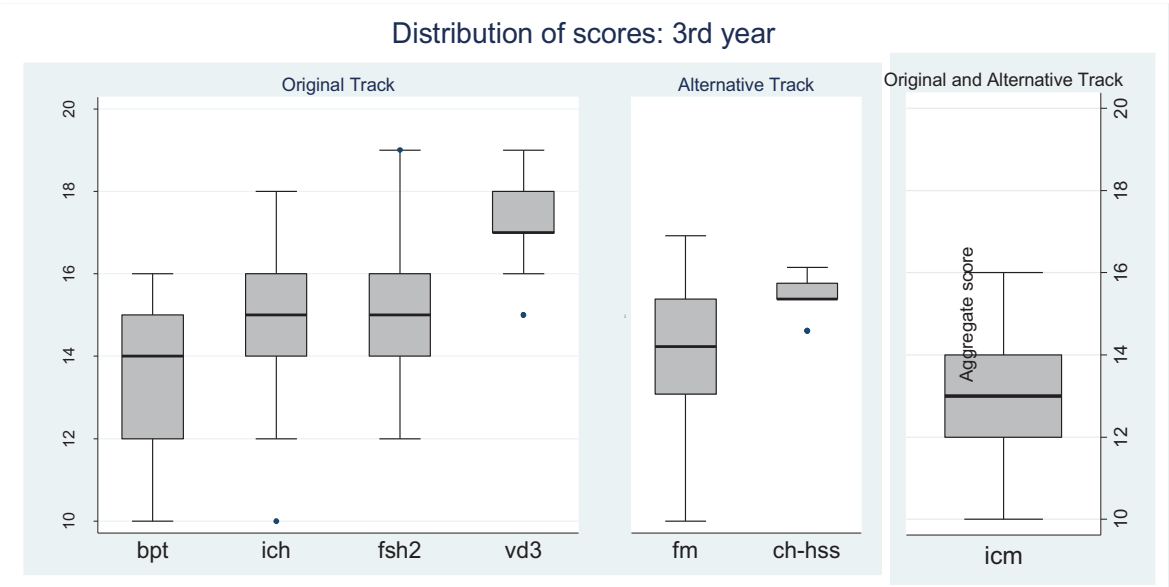
Distribution of Student Scores(*)

2012-2013



Failure	12 (9%)	12 (9%)	12 (9%)	4 (3%)	6 (24%)	0 (0%)	14 (9%)

2013-2014



Failure	12(10%)	9(8%)	4(3%)	4(3%)	3(14%)	0 (0%)	15(10%)

Legend
BPT – Biopathology and Introduction to Therapeutics
FSH2 – Family, Society and Health II
ICH – Introduction to Community Health
ICM – Introduction to Clinical Medicine
VD3 – Vertical Domains III
FM – Foundations of Medicine
CHHSS - Community Health, Human and Social Sciences

(*) Output provided by the database of ECS-UM Longitudinal Study.

Curricular Unit: **Biopathology and Introduction to Therapeutics**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	6	3	0	3	0	0	3	3	0
	Strongly disagree	0	3	0	3	6	0	0	0	0	0	3	0
	Disagree	3	6	0	6	3	3	6	10	3	0	6	3
	Unfavorable responses	**3**	**10**	**0**	**16**	**13**	**3**	**10**	**10**	**3**	**3**	**13**	**3**
	Agree	19	29	23	39	55	39	32	29	39	42	42	23
	Strongly agree	52	52	35	42	26	35	39	48	48	35	26	39
	Completely agree	26	10	42	3	6	23	19	13	6	19	19	32
	Favorable responses	**97**	**90**	**100**	**84**	**87**	**97**	**90**	**90**	**94**	**97**	**87**	**94**
	No opinion	0	0	0	0	0	0	0	0	3	0	0	3
2012/2013	**Unfavorable responses**	**3**	**10**	**3**	**31**	**24**	**6**	**5**	**5**	**10**	**9**	**11**	**8**
	Favorable responses	**96**	**88**	**97**	**68**	**74**	**90**	**94**	**94**	**89**	**86**	**85**	**90**
	No opinion	1	2	1	1	2	4	1	1	1	5	4	2

Curricular Unit (method items)

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	3	0	0	0	0	0	0	0	0	3
	Strongly disagree	6	3	3	0	0	0	0	0	0	6
	Disagree	6	10	6	6	3	3	3	3	3	10
	Unfavorable responses	**16**	**13**	**10**	**6**	**3**	**3**	**3**	**3**	**3**	**19**
	Agree	55	52	45	42	32	35	10	16	29	35
	Strongly agree	13	19	39	42	42	35	29	23	26	42
	Completely agree	16	16	6	10	19	23	26	32	42	3
	Favorable responses	**84**	**87**	**90**	**94**	**94**	**94**	**65**	**71**	**97**	**81**
	No opinion	0	0	0	0	3	3	32	26	0	0
2012/2013	**Unfavorable responses**	**24**	**25**	**25**	**9**	**17**	**15**	**15**	**10**	**28**	**33**
	Favorable responses	**68**	**67**	**73**	**88**	**77**	**78**	**57**	**60**	**70**	**65**
	No opinion	8	8	3	3	6	7	28	31	2	2

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	0	0	0	1	0	0
	Strongly disagree	0	0	1	1	0	1	1	0
	Disagree	2	2	3	3	4	3	3	4
	Unfavorable responses	**2**	**2**	**4**	**4**	**5**	**4**	**5**	**4**
	Agree	14	17	22	24	26	25	21	22
	Strongly agree	34	27	31	30	26	28	30	30
	Completely agree	46	50	39	38	40	38	40	39
	Favorable responses	**94**	**94**	**92**	**92**	**91**	**92**	**91**	**91**
	No opinion	4	4	4	4	4	4	4	4
2012/2013	**Unfavorable responses**	**4**	**5**	**9**	**10**	**9**	**11**	**8**	**9**
	Favorable responses	**95**	**94**	**90**	**89**	**89**	**88**	**91**	**90**
	No opinion	1	1	1	1	1	1	1	1

Curricular Unit: **Introduction to Community Health**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	7	7	0	7	7	21	24	24	7	14	14	7
	Strongly disagree	3	14	14	7	3	28	17	0	3	7	10	0
	Disagree	7	14	10	14	17	17	34	21	17	21	34	17
	Unfavorable responses	**17**	**34**	**24**	**28**	**28**	**66**	**76**	**45**	**28**	**41**	**59**	**24**
	Agree	41	45	41	41	21	24	14	38	31	38	28	34
	Strongly agree	24	7	24	17	28	3	0	3	14	14	3	21
	Completely agree	14	10	7	10	17	3	7	10	14	3	3	10
	Favorable responses	**79**	**62**	**72**	**69**	**66**	**31**	**21**	**52**	**59**	**55**	**34**	**66**
	No opinion	3	3	3	3	7	3	3	3	14	3	7	10
2012/2013	**Unfavorable responses**	**8**	**12**	**14**	**15**	**11**	**13**	**29**	**12**	**34**	**24**	**31**	**24**
	Favorable responses	**88**	**84**	**82**	**81**	**85**	**82**	**66**	**82**	**55**	**70**	**59**	**70**
	No opinion	4	4	4	4	4	5	5	6	11	5	10	5

Curricular Unit (method items)		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	Not collected									
	Strongly disagree										
	Disagree										
	Unfavorable responses										
	Agree										
	Strongly agree										
	Completely agree										
	Favorable responses										
	No opinion										
2012/2013	**Unfavorable responses**	**28**	**38**	**10**	**20**	**23**	**22**	**17**	**12**	**17**	**18**
	Favorable responses	**67**	**57**	**85**	**73**	**68**	**70**	**42**	**48**	**78**	**77**
	No opinion	5	5	5	6	8	7	41	40	5	5

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	2	2	2	2	3	2
	Strongly disagree	1	3	1	3	4	3	1	2
	Disagree	1	6	5	7	6	7	5	4
	Unfavorable responses	**2**	**8**	**7**	**12**	**11**	**11**	**8**	**7**
	Agree	24	24	26	32	33	32	32	30
	Strongly agree	27	18	28	21	23	21	23	22
	Completely agree	40	43	31	28	27	29	30	28
	Favorable responses	**92**	**85**	**85**	**80**	**83**	**81**	**85**	**80**
	No opinion	7	7	7	7	6	7	7	12
2012/2013	**Unfavorable responses**	**9**	**9**	**14**	**14**	**14**	**16**	**14**	**13**
	Favorable responses	**85**	**86**	**80**	**79**	**80**	**77**	**80**	**81**
	No opinion	6	6	6	7	6	6	6	6

Curricular Unit: **Family, Society and Health II**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	6	0	0	0	0	6	6	0
	Strongly disagree	0	6	0	6	0	6	6	0	0	0	6	0
	Disagree	0	0	6	6	39	17	6	6	0	0	6	6
	Unfavorable responses	**0**	**6**	**6**	**11**	**44**	**22**	**11**	**6**	**0**	**6**	**17**	**6**
	Agree	50	56	56	39	22	50	56	44	39	67	50	50
	Strongly agree	44	33	33	33	28	17	28	39	28	22	22	39
	Completely agree	6	6	6	17	6	6	6	6	28	6	6	6
	Favorable responses	**100**	**94**	**94**	**89**	**56**	**72**	**89**	**89**	**94**	**94**	**78**	**94**
	No opinion	0	0	0	0	0	6	0	6	6	0	6	0
2012/2013	**Unfavorable responses**	**12**	**13**	**16**	**10**	**24**	**15**	**21**	**9**	**13**	**16**	**23**	**14**
	Favorable responses	**86**	**82**	**82**	**88**	**72**	**82**	**77**	**89**	**82**	**78**	**72**	**83**
	No opinion	2	5	2	2	4	3	2	2	5	5	5	3

Curricular Unit: **Vertical Domains III**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	1	2	–	0	1	1	–	2	3
	Strongly disagree	5	7	4	9	10	–	5	6	2	–	3	4
	Disagree	11	13	13	14	9	–	11	8	14	–	11	10
	Unfavorable responses	**15**	**19**	**17**	**24**	**20**	**–**	**16**	**15**	**17**	**–**	**15**	**16**
	Agree	34	36	34	26	33	–	36	39	33	–	30	39
	Strongly agree	35	35	33	33	31	–	34	31	30	–	36	31
	Completely agree	13	7	13	14	12	–	12	12	16	–	16	11
	Favorable responses	**82**	**77**	**80**	**74**	**75**	**–**	**82**	**82**	**79**	**–**	**82**	**81**
	No opinion	3	4	3	3	5	–	3	3	4	–	3	3
2012/2013	**Unfavorable responses**	**8**	**5**	**8**	**6**	**7**	**-**	**7**	**5**	**7**	**-**	**6**	**7**
	Favorable responses	**91**	**93**	**90**	**91**	**91**	**-**	**91**	**92**	**89**	**-**	**91**	**89**
	No opinion	2	2	3	3	3	-	3	3	4	-	3	4

Curricular Unit: **Foundations of Medicine**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	0	0	0	0	0	0	0	0
	Strongly disagree	0	0	0	14	0	0	0	0	14	0	0	0
	Disagree	0	0	0	29	14	14	0	0	14	0	0	0
	Unfavorable responses	**0**	**0**	**0**	**43**	**14**	**14**	**0**	**0**	**29**	**0**	**0**	**0**
	Agree	0	43	0	29	43	29	43	29	14	14	14	14
	Strongly agree	71	43	43	14	29	14	43	14	29	29	43	43
	Completely agree	29	14	57	14	14	29	14	57	14	57	43	43
	Favorable responses	**100**	**100**	**100**	**57**	**86**	**71**	**100**	**100**	**57**	**100**	**100**	**100**
	No opinion	0	0	0	0	0	0	0	0	0	0	0	0
2012/2013	**Unfavorable responses**	**9**	**18**	**0**	**55**	**27**	**0**	**14**	**5**	**32**	**5**	**9**	**5**
	Favorable responses	**86**	**77**	**95**	**41**	**68**	**95**	**82**	**91**	**59**	**91**	**86**	**91**
	No opinion	5	5	5	5	5	5	5	5	9	5	5	5

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	1	0	0	0	0	0	0
	Strongly disagree	0	0	0	0	0	0	0	0
	Disagree	1	2	2	4	4	4	4	3
	Unfavorable responses	**1**	**3**	**2**	**4**	**4**	**4**	**4**	**3**
	Agree	4	3	13	11	7	10	10	6
	Strongly agree	14	12	30	34	30	19	14	18
	Completely agree	81	83	54	52	58	68	72	73
	Favorable responses	**99**	**97**	**98**	**96**	**96**	**96**	**96**	**97**
	No opinion	0	0	0	0	0	0	0	0
2012/2013	**Unfavorable responses**	**1**	**1**	**4**	**4**	**4**	**5**	**4**	**4**
	Favorable responses	**92**	**93**	**89**	**89**	**89**	**89**	**89**	**89**
	No opinion	6	6	6	6	7	7	6	7

Curricular Unit: **Community Health, Human and Social Sciences**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	0	0	0	0	0	0	0	0	0
	Strongly disagree	0	0	0	0	0	0	0	0	0	0	0	0
	Disagree	0	0	0	0	0	0	0	0	0	0	0	0
	Unfavorable responses	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Agree	100	0	100	100	100	0	0	0	100	0	100	100
	Strongly agree	0	0	0	0	0	0	0	0	0	0	0	0
	Completely agree	0	0	0	0	0	0	0	0	0	0	0	0
	Favorable responses	**100**	**0**	**100**	**100**	**100**	**0**	**0**	**0**	**100**	**0**	**100**	**100**
	No opinion	0	100	0	0	0	100	100	100	0	100	0	0
2012/2013	**Unfavorable responses**	**10**	**20**	**0**	**20**	**30**	**50**	**100**	**20**	**30**	**70**	**60**	**50**
	Favorable responses	**90**	**70**	**100**	**70**	**60**	**50**	**0**	**70**	**70**	**30**	**40**	**50**
	No opinion	0	10	0	10	10	0	0	10	0	0	0	0

Evaluation of Academic Faculty

Faculty		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	Not available							
	Strongly disagree								
	Disagree								
	Unfavorable responses								
	Agree								
	Strongly agree								
	Completely agree								
	Favorable responses								
	No opinion								
2012/2013	**Unfavorable responses**	**8**	**24**	**16**	**16**	**14**	**16**	**18**	**16**
	Favorable responses	**82**	**71**	**78**	**76**	**78**	**76**	**75**	**76**
	No opinion	10	6	6	8	8	8	8	8

Curricular Unit: **Introduction to Clinical Medicine**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	2	0	1	8	2	1	1	2	2	2	1
	Strongly disagree	4	7	0	4	14	6	4	5	2	5	2	2
	Disagree	5	15	3	10	21	10	16	11	13	11	14	2
	Unfavorable responses	**9**	**23**	**3**	**15**	**43**	**19**	**21**	**17**	**17**	**18**	**17**	**5**
	Agree	31	38	15	35	27	37	33	39	31	36	31	23
	Strongly agree	42	34	43	36	23	34	35	31	34	31	38	40
	Completely agree	18	5	39	13	5	11	10	13	16	13	14	32
	Favorable responses	**91**	**77**	**97**	**85**	**56**	**81**	**78**	**83**	**81**	**80**	**83**	**95**
	No opinion	0	0	0	0	1	0	1	1	2	2	0	1
2012/2013	**Unfavorable responses**	**6**	**16**	**2**	**17**	**26**	**14**	**11**	**8**	**9**	**8**	**6**	**4**
	Favorable responses	**93**	**83**	**96**	**82**	**71**	**85**	**88**	**90**	**88**	**89**	**91**	**95**
	No opinion	1	1	1	1	3	1	1	1	2	3	4	1

Evaluation of Clinical Tutors/Services

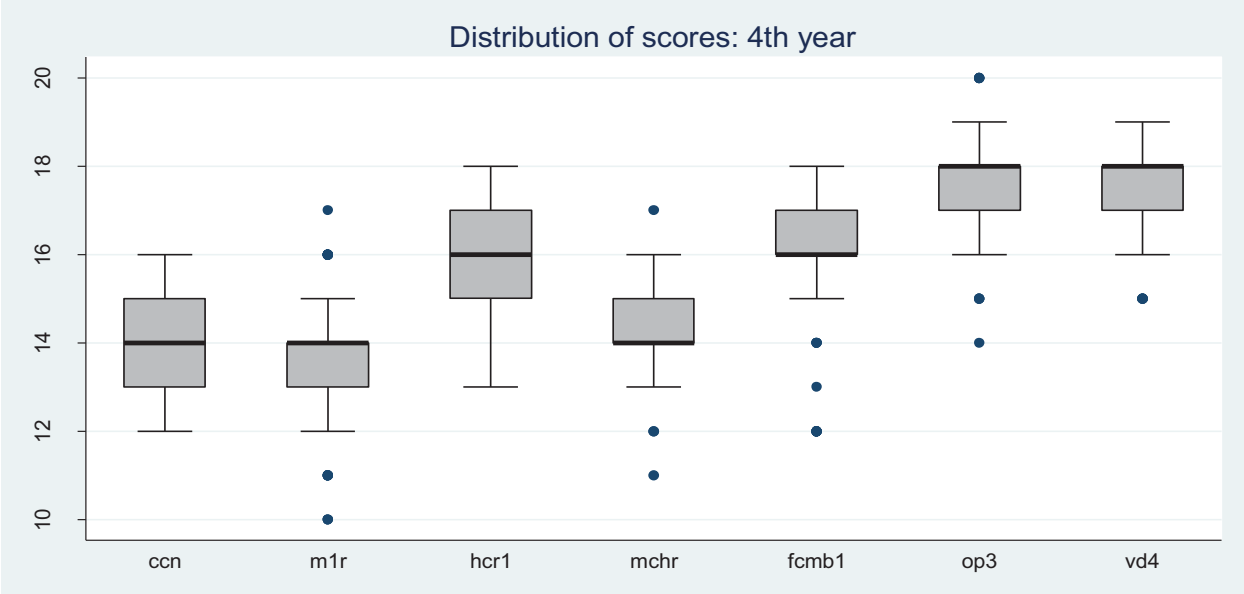
Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	2	2	1	1	2	4	1	6	1	2
	Strongly disagree	7	2	2	1	3	1	0	3	4	1
	Disagree	8	5	7	4	5	7	0	7	5	2
	Unfavorable responses	**17**	**8**	**10**	**6**	**10**	**12**	**1**	**16**	**10**	**5**
	Agree	19	23	17	14	13	20	9	20	16	11
	Strongly agree	25	24	17	26	20	20	22	13	13	27
	Completely agree	39	46	56	54	57	48	67	52	59	55
	Favorable responses	**83**	**92**	**90**	**94**	**90**	**88**	**98**	**84**	**88**	**93**
	No opinion	0	0	0	0	0	1	1	0	2	2
2012/2013	**Unfavorable responses**	**8**	**6**	**4**	**4**	**6**	**10**	**1**	**10**	**4**	**0**
	Favorable responses	**90**	**93**	**96**	**96**	**93**	**88**	**99**	**88**	**95**	**99**
	No opinion	1	1	1	1	1	1	1	1	1	1

4TH YEAR

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
4th year	SC-CSH	Health Centre Residency I	8	✓
	C	Medicine I Residency	17	✓
	C	Maternal and Child Health Residency	17	✓
	C	Clinical Neurosciences	10	✓
	C / P / CBB	From the Clinic to Molecular Biology I	3	✓
	CBB / SC-CSH / P / C	Option Projects III	4	✓
	SC-CSH	Vertical Domains IV	1	✓
		TOTAL	60	

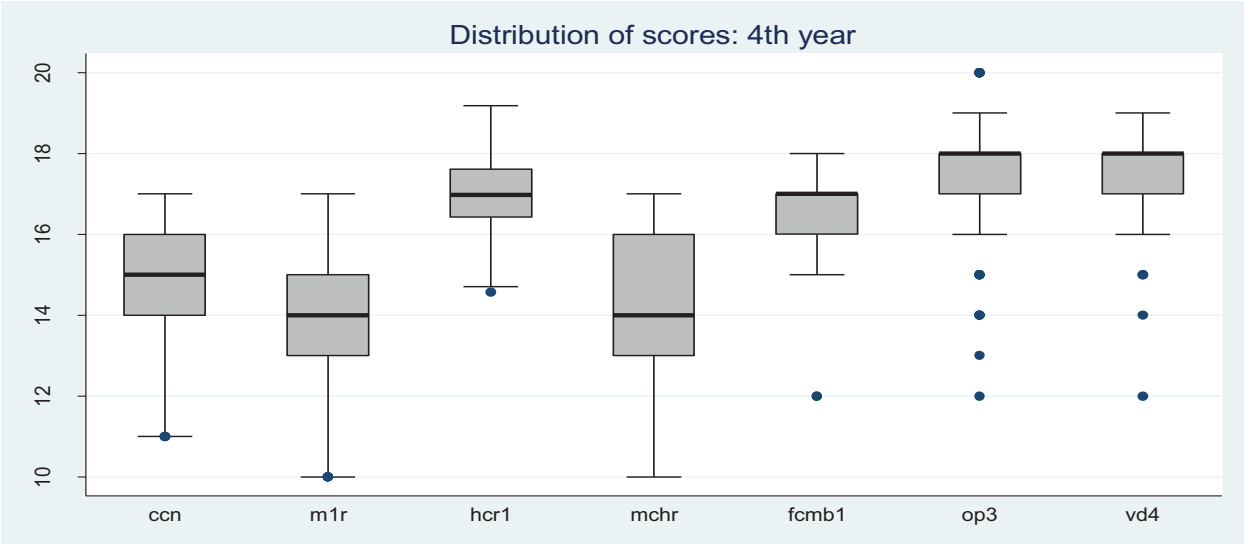
Distribution of Student Scores (*)

2012-2013*



Failure	19 (14%)	18 (13%)	2(2%)	10 (7%)	7 (5%)	5(4%	7 (5%)

2013-2014



Failure	11 (7%)	11 (7%)	0 (0%)	12 (8%)	6 (4%)	6 (4%)	3 (2%)

Legend
CCN – Clinical Neurosciences
M1R – Medicine I Residency
OP3 – Option Project III
HCR1 – Health Centers Residency I
MCHR – Maternal and Child Health Residency
FCMB1 – From Clinical to Molecular Biology I
VD4 – Vertical Domains IV
(*) Output provided by the database of ECS-UM Longitudinal Study

Curricular Unit: **Medicine I Residency**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	1	0	4	2	1	1	1	1	2	1	0
	Strongly disagree	1	1	0	9	5	4	5	2	2	0	2	0
	Disagree	5	6	4	21	15	7	11	7	2	6	10	4
	Unfavorable responses	**6**	**9**	**4**	**33**	**22**	**12**	**17**	**11**	**6**	**9**	**14**	**4**
	Agree	23	38	16	35	41	42	38	42	38	44	38	36
	Strongly agree	44	42	49	22	27	30	31	30	38	30	35	35
	Completely agree	23	9	28	7	9	11	10	14	12	10	9	23
	Favorable responses	**91**	**89**	**94**	**64**	**77**	**83**	**79**	**85**	**89**	**84**	**81**	**94**
	No opinion	2	2	2	2	1	5	4	4	5	7	5	2
2012/2013	**Unfavorable responses**	**1**	**25**	**3**	**31**	**41**	**16**	**36**	**8**	**3**	**9**	**20**	**0**
	Favorable responses	**98**	**74**	**96**	**68**	**55**	**83**	**63**	**90**	**96**	**89**	**79**	**97**
	No opinion	1	1	1	1	4	1	1	2	1	2	1	3

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	3	3	3	2	3	4	2	5	3	2
	Strongly disagree	3	2	2	2	3	3	1	4	3	2
	Disagree	4	6	5	3	6	7	1	9	7	3
	Unfavorable responses	**10**	**11**	**10**	**8**	**12**	**15**	**4**	**17**	**13**	**7**
	Agree	13	20	14	14	19	21	10	14	14	17
	Strongly agree	32	28	24	26	24	23	22	25	26	29
	Completely agree	44	39	49	48	42	32	60	42	43	45
	Favorable responses	**88**	**87**	**87**	**89**	**85**	**77**	**92**	**81**	**83**	**91**
	No opinion	2	2	3	4	3	9	4	2	4	2
2012/2013	**Unfavorable responses**	**9**	**8**	**8**	**7**	**10**	**16**	**3**	**13**	**10**	**5**
	Favorable responses	**88**	**89**	**87**	**88**	**84**	**75**	**90**	**81**	**82**	**92**
	No opinion	3	3	5	6	6	9	6	6	8	3

Curricular Unit: **Clinical Neurosciences**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	1	1	1	3	4	1	3	3	1	1	1	1
	Strongly disagree	1	3	0	4	4	1	1	0	4	0	1	0
	Disagree	0	1	3	13	10	4	9	3	8	8	5	1
	Unfavorable responses	**3**	**5**	**4**	**19**	**18**	**6**	**13**	**5**	**13**	**9**	**8**	**3**
	Agree	29	33	24	28	39	39	36	41	38	39	33	28
	Strongly agree	41	46	45	38	30	36	35	38	35	33	43	41
	Completely agree	28	16	28	15	13	19	15	16	14	16	13	26
	Favorable responses	**98**	**95**	**96**	**80**	**81**	**94**	**86**	**95**	**86**	**88**	**88**	**95**
	No opinion	0	0	0	1	1	0	1	0	1	4	5	3
2012/2013	**Unfavorable responses**	**4**	**8**	**1**	**11**	**21**	**9**	**15**	**8**	**8**	**9**	**5**	**2**
	Favorable responses	**94**	**89**	**96**	**86**	**75**	**88**	**83**	**88**	**88**	**88**	**93**	**94**
	No opinion	3	3	3	3	5	3	3	4	4	3	3	5

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	0	0	0	0	0	0	0	1	1	0
	Strongly disagree	0	1	0	0	1	1	0	1	0	0
	Disagree	5	4	3	2	3	4	1	5	4	2
	Unfavorable responses	**6**	**5**	**4**	**3**	**4**	**6**	**1**	**7**	**5**	**2**
	Agree	21	16	13	14	18	26	10	16	15	13
	Strongly agree	29	28	21	24	26	23	18	27	25	29
	Completely agree	43	50	62	59	52	39	70	50	53	56
	Favorable responses	**94**	**95**	**96**	**97**	**96**	**88**	**98**	**93**	**93**	**98**
	No opinion	0	0	0	0	0	6	1	0	1	0
2012/2013	**Unfavorable responses**	**20**	**12**	**8**	**8**	**15**	**19**	**4**	**15**	**11**	**9**
	Favorable responses	**80**	**88**	**92**	**92**	**85**	**73**	**95**	**85**	**89**	**91**
	No opinion	0	0	0	0	0	7	1	0	1	0

Curricular Unit: **Health Centers Residency I**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	1	0	1	6	0	1	4	0	6	1	3	1
	Strongly disagree	3	0	3	4	0	0	9	4	5	0	4	1
	Disagree	3	8	9	12	5	9	22	4	6	14	23	13
	Unfavorable responses	**6**	**8**	**13**	**22**	**5**	**10**	**35**	**8**	**18**	**16**	**30**	**16**
	Agree	44	44	44	31	36	38	34	47	36	42	36	47
	Strongly agree	35	32	26	26	39	31	19	27	26	27	22	21
	Completely agree	13	14	14	18	17	17	10	17	13	10	8	13
	Favorable responses	**92**	**91**	**84**	**75**	**92**	**86**	**64**	**91**	**75**	**79**	**66**	**81**
	No opinion	1	1	3	3	3	4	1	1	6	5	4	4
2012/2013	**Unfavorable responses**	**14**	**29**	**17**	**18**	**31**	**28**	**47**	**32**	**21**	**26**	**39**	**20**
	Favorable responses	**84**	**68**	**81**	**79**	**60**	**65**	**49**	**64**	**72**	**67**	**59**	**76**
	No opinion	2	2	2	3	9	6	3	4	7	6	2	4

Evaluation of Clinical Tutors/Services

not applicable

Curricular Unit: **Maternal and Child Health Residency**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	0	0	7	12	0	2	2	2	2	2	0
	Strongly disagree	3	7	0	9	10	12	5	3	3	3	3	0
	Disagree	2	3	2	16	10	5	12	5	5	3	2	0
	Unfavorable responses	**5**	**10**	**2**	**31**	**33**	**17**	**19**	**10**	**10**	**9**	**7**	**0**
	Agree	29	31	31	31	47	36	29	33	43	47	43	36
	Strongly agree	36	48	38	29	16	29	41	41	36	31	36	40
	Completely agree	29	10	29	9	5	14	10	14	9	12	14	22
	Favorable responses	**95**	**90**	**98**	**69**	**67**	**79**	**81**	**88**	**88**	**90**	**93**	**98**
	No opinion	0	0	0	0	0	3	0	2	2	2	0	2
2012/2013	**Unfavorable responses**	**8**	**20**	**3**	**29**	**68**	**20**	**28**	**9**	**10**	**16**	**16**	**6**
	Favorable responses	**91**	**77**	**96**	**70**	**30**	**77**	**70**	**89**	**87**	**82**	**83**	**92**
	No opinion	1	2	1	1	2	2	2	2	3	2	1	1

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	In process									
	Strongly disagree										
	Disagree										
	Unfavorable responses										
	Agree										
	Strongly agree										
	Completely agree										
	Favorable responses										
	No opinion										
2012/2013	**Unfavorable responses**	**14**	**8**	**5**	**7**	**12**	**7**	**2**	**9**	**6**	**5**
	Favorable responses	**84**	**90**	**92**	**91**	**84**	**88**	**93**	**89**	**90**	**93**
	No opinion	2	2	3	3	4	5	4	2	4	2

Curricular Unit: **From Clinical to Molecular Biology I**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	4	4	2	5	4	2	2	2	4	2	2	4
	Strongly disagree	2	0	0	4	0	5	5	0	2	0	5	0
	Disagree	9	9	13	14	5	7	5	11	16	4	18	14
	Unfavorable responses	**14**	**13**	**14**	**23**	**9**	**14**	**13**	**13**	**21**	**5**	**25**	**18**
	Agree	39	36	41	30	41	32	41	38	30	45	45	45
	Strongly agree	21	25	23	27	21	27	25	25	23	16	11	20
	Completely agree	25	23	21	20	21	21	21	23	21	27	18	16
	Favorable responses	**86**	**84**	**86**	**77**	**84**	**80**	**88**	**86**	**75**	**88**	**73**	**80**
	No opinion	0	4	0	0	7	5	0	2	4	7	2	2
2012/2013	**Unfavorable responses**	**17**	**19**	**27**	**17**	**22**	**23**	**19**	**14**	**19**	**12**	**34**	**30**
	Favorable responses	**81**	**73**	**70**	**77**	**66**	**66**	**77**	**79**	**74**	**81**	**64**	**68**
	No opinion	3	8	3	6	12	10	4	6	6	8	3	3

Curricular Unit: **Option Projects III**

Overall Evaluation

Curricular Unit (specific items)		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	0	1	2	2	0	0	0
	Strongly disagree	1	0	1	0	5	2	0	0
	Disagree	3	4	4	10	16	8	2	4
	Unfavorable responses	**4**	**4**	**6**	**11**	**23**	**10**	**2**	**4**
	Agree	24	32	31	24	31	24	23	25
	Strongly agree	35	40	40	31	29	29	33	37
	Completely agree	37	22	21	32	15	31	43	33
	Favorable responses	**96**	**94**	**93**	**88**	**75**	**85**	**98**	**96**
	No opinion	0	2	2	1	2	6	0	0
2012/2013	**Unfavorable responses**	**0**	**3**	**4**	**11**	**20**	**7**	**0**	**4**
	Favorable responses	**99**	**86**	**88**	**85**	**79**	**91**	**100**	**96**
	No opinion	1	11	8	4	1	2	0	0

Curricular Unit: **Vertical Domains IV**

Overall Evaluation

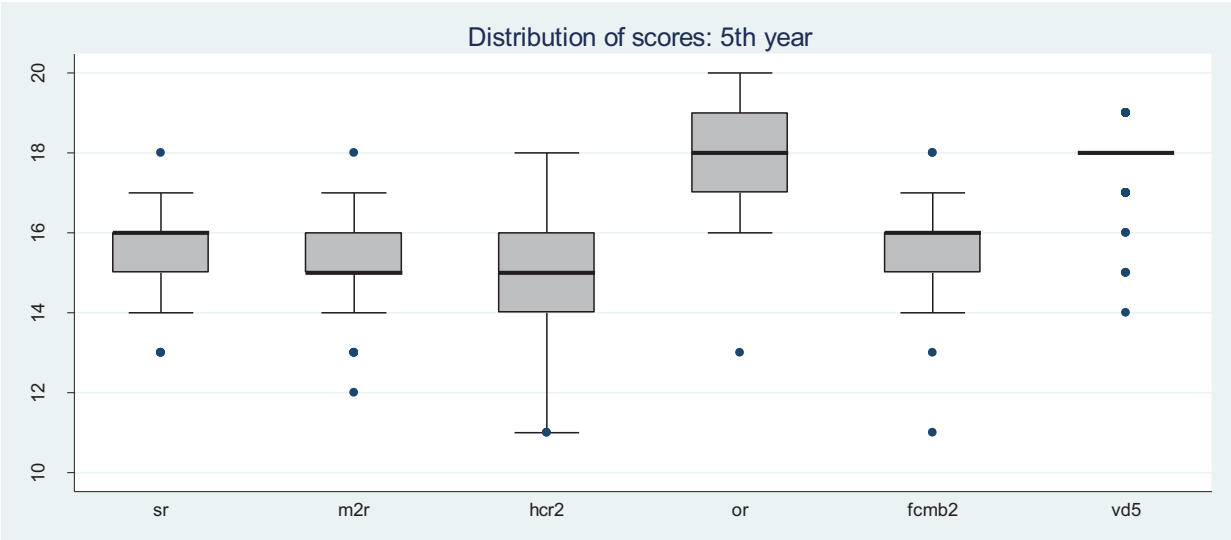
Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	2	1	1	2	1	–	1	1	1	–	1	1
	Strongly disagree	2	2	2	4	1	–	4	0	1	–	2	2
	Disagree	7	7	15	8	12	–	8	7	9	–	10	19
	Unfavorable responses	**10**	**10**	**18**	**14**	**13**	**–**	**13**	**8**	**10**	**–**	**13**	**22**
	Agree	29	30	38	32	34	–	39	37	30	–	30	33
	Strongly agree	32	34	26	28	27	–	28	29	27	–	30	22
	Completely agree	27	23	16	22	20	–	19	25	24	–	24	19
	Favorable responses	**88**	**87**	**80**	**83**	**81**	**–**	**86**	**91**	**82**	**–**	**84**	**75**
	No opinion	2	3	2	3	6	–	2	2	8	–	2	3
2012/2013	**Unfavorable responses**	**6**	**8**	**16**	**9**	**13**	**-**	**5**	**6**	**7**	**-**	**7**	**16**
	Favorable responses	**93**	**91**	**84**	**91**	**84**	**-**	**94**	**93**	**86**	**-**	**93**	**84**
	No opinion	1	1	0	0	3	-	1	1	7	-	0	0

5TH YEAR

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
5th year	SC-CSH	Health Centre Residency II	13	✓
	C	Surgery Residency	18,5	✓
	C	Medicine II Residency	16	✓
	C	Optional Residencies	8,5	✓
	C / P / CBB	From the Clinic to Molecular Biology II	3	✓
	SC-CSH	Vertical Domains V	1	✓
		TOTAL	60	

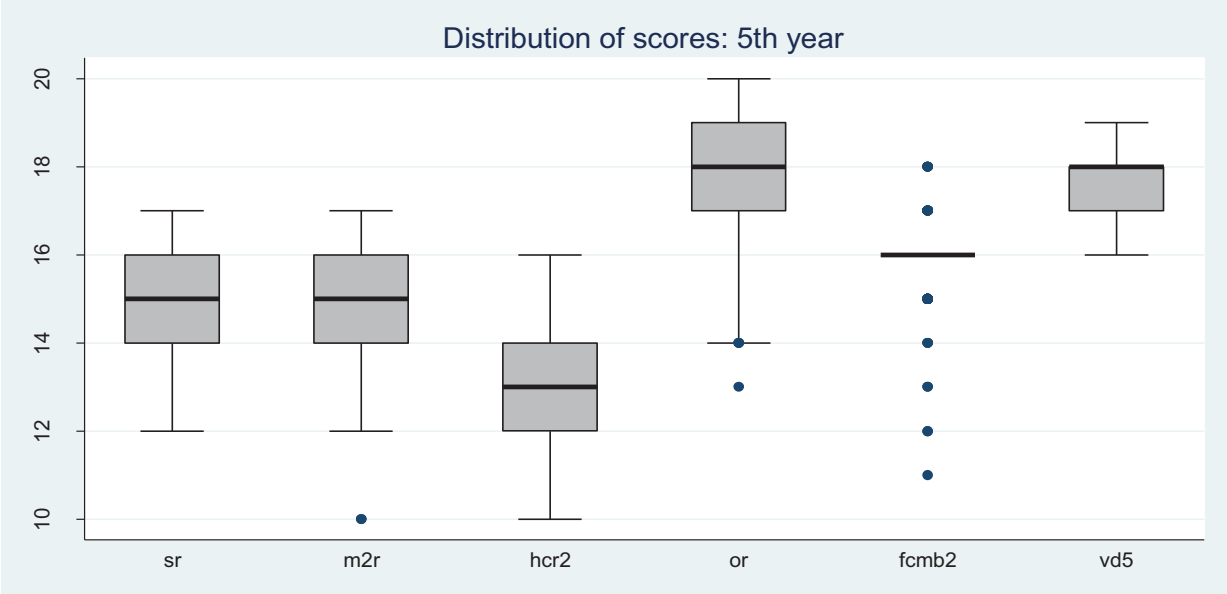
Distribution of Student Scores(*)

2012-2013



Failure	4 (4%)	5 (5%)	7 (6%)	5(4%)	4 (3%)	5 (4%)

2013-2014



Failure	5 (4%)	5(4%)	14(11%)	1 (1%)	10(8%)	3 (2%)

Legend
SR – Surgery Residency
M2R – Medicine II Residency
HCR2 – Health Centers Residency II
OR – Optional Residencies
FCMB2 – From Clinical to Molecular Biology II
VD5 – Vertical Domains V

(*) Output provided by the database of ECS-UM Longitudinal Study

Curricular Unit: **Surgery Residency**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	2	4	0	13	4	10	13	6	4	2	8	2
	Strongly disagree	4	4	4	8	10	6	8	0	4	6	6	2
	Disagree	2	4	2	17	6	4	17	10	6	15	6	2
	Unfavorable responses	**8**	**13**	**6**	**38**	**21**	**21**	**38**	**17**	**15**	**23**	**21**	**6**
	Agree	25	33	21	27	38	33	29	35	42	33	35	29
	Strongly agree	50	42	46	27	35	38	27	27	33	33	31	46
	Completely agree	15	10	25	6	4	6	4	17	6	8	10	15
	Favorable responses	**90**	**85**	**92**	**60**	**77**	**77**	**60**	**79**	**81**	**75**	**77**	**90**
	No opinion	2	2	2	2	2	2	2	4	4	2	2	4
2012/2013	**Unfavorable responses**	**4**	**17**	**6**	**39**	**23**	**19**	**38**	**21**	**9**	**23**	**23**	**6**
	Favorable responses	**94**	**81**	**91**	**58**	**64**	**75**	**58**	**75**	**87**	**70**	**70**	**88**
	No opinion	3	3	3	3	13	5	4	4	4	6	6	5

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	2	2	2	1	2	2	1	3	2	2
	Strongly disagree	2	2	1	1	2	2	0	3	1	1
	Disagree	5	6	2	2	6	7	1	6	5	3
	Unfavorable responses	**9**	**9**	**5**	**5**	**11**	**11**	**2**	**12**	**7**	**6**
	Agree	19	20	18	16	20	22	11	21	20	20
	Strongly agree	27	28	25	24	24	24	24	22	23	31
	Completely agree	44	42	52	52	43	38	60	44	46	44
	Favorable responses	**91**	**90**	**94**	**93**	**87**	**85**	**95**	**87**	**90**	**94**
	No opinion	0	1	2	2	2	4	2	1	3	0
2012/2013	**Unfavorable responses**	**10**	**9**	**7**	**8**	**12**	**15**	**3**	**13**	**9**	**7**
	Favorable responses	**88**	**89**	**88**	**88**	**83**	**79**	**91**	**84**	**83**	**91**
	No opinion	2	2	5	5	5	6	6	3	8	2

Curricular Unit: **Medicine II Residency**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	5	7	2	9	5	5	7	5	5	7	7	5
	Strongly disagree	2	0	0	9	7	9	2	0	2	0	0	0
	Disagree	2	12	5	37	12	5	14	12	5	7	7	2
	Unfavorable responses	**9**	**19**	**7**	**56**	**23**	**19**	**23**	**16**	**12**	**14**	**14**	**7**
	Agree	16	21	14	30	28	30	37	30	19	35	30	21
	Strongly agree	58	49	53	12	35	40	33	44	51	37	47	42
	Completely agree	16	12	26	2	9	12	7	7	16	14	9	30
	Favorable responses	**91**	**81**	**93**	**44**	**72**	**81**	**77**	**81**	**86**	**86**	**86**	**93**
	No opinion	0	0	0	0	5	0	0	2	2	0	0	0
2012/2013	**Unfavorable responses**	**1**	**8**	**4**	**45**	**15**	**12**	**22**	**11**	**5**	**19**	**18**	**3**
	Favorable responses	**96**	**89**	**93**	**51**	**75**	**81**	**74**	**84**	**89**	**75**	**77**	**90**
	No opinion	3	3	3	4	10	7	4	5	5	5	5	7

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	3	3	2	2	3	4	1	4	3	3
	Strongly disagree	2	1	1	1	1	1	0	1	1	1
	Disagree	8	4	3	4	5	6	1	4	3	3
	Unfavorable responses	**13**	**7**	**6**	**6**	**9**	**11**	**2**	**9**	**6**	**7**
	Agree	19	15	11	11	15	21	9	15	15	15
	Strongly agree	29	29	25	26	25	21	24	26	26	31
	Completely agree	36	47	57	55	46	36	62	45	48	46
	Favorable responses	**84**	**91**	**92**	**92**	**86**	**78**	**94**	**87**	**89**	**91**
	No opinion	3	2	2	2	5	11	3	4	4	2
2012/2013	**Unfavorable responses**	**18**	**7**	**6**	**5**	**10**	**17**	**3**	**9**	**8**	**9**
	Favorable responses	**78**	**89**	**90**	**90**	**85**	**77**	**92**	**86**	**86**	**87**
	No opinion	4	4	4	4	5	7	5	5	6	4

Curricular Unit: **Health Centers Residency II**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	13	26	4	11	47	15	36	26	6	21	26	8
	Strongly disagree	9	15	2	4	19	11	15	9	4	13	11	4
	Disagree	11	34	9	8	21	21	25	19	8	23	23	15
	Unfavorable responses	**34**	**75**	**15**	**23**	**87**	**47**	**75**	**55**	**17**	**57**	**60**	**26**
	Agree	43	21	34	38	11	36	17	36	43	34	28	42
	Strongly agree	17	4	32	30	2	9	6	6	28	4	6	21
	Completely agree	6	0	19	8	0	0	2	2	11	2	2	11
	Favorable responses	**66**	**25**	**85**	**75**	**13**	**45**	**25**	**43**	**83**	**40**	**36**	**74**
	No opinion	0	0	0	2	0	8	0	2	0	4	4	0
2012/2013	**Unfavorable responses**	**13**	**26**	**3**	**21**	**29**	**19**	**33**	**19**	**10**	**35**	**31**	**8**
	Favorable responses	**87**	**72**	**97**	**78**	**65**	**81**	**67**	**79**	**87**	**65**	**67**	**91**
	No opinion	0	3	0	1	5	0	0	1	3	0	3	1

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	1	0	0	0	0	0	0	0	0	0
	Strongly disagree	1	1	0	0	0	0	1	0	2	1
	Disagree	1	2	1	1	0	1	0	2	1	1
	Unfavorable responses	**3**	**3**	**1**	**1**	**0**	**1**	**1**	**2**	**3**	**2**
	Agree	3	6	2	6	6	7	6	3	3	3
	Strongly agree	16	14	9	16	14	14	18	9	14	9
	Completely agree	77	77	88	77	81	78	75	85	80	85
	Favorable responses	**97**	**97**	**99**	**99**	**100**	**99**	**99**	**98**	**97**	**98**
	No opinion	0	0	0	0	0	0	0	0	0	0
2012/2013	**Unfavorable responses**	**3**	**1**	**1**	**3**	**1**	**4**	**1**	**1**	**1**	**1**
	Favorable responses	**97**	**99**	**99**	**97**	**99**	**96**	**99**	**99**	**99**	**99**
	No opinion	0	0	0	0	0	0	0	0	0	0

Curricular Unit: **Optional Residencies**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	-	1	-	-	0	-	-	3	-	2	0
	Strongly disagree	1	-	1	-	-	4	-	-	1	-	1	1
	Disagree	4	-	1	-	-	6	-	-	6	-	2	1
	Unfavorable responses	**5**	**-**	**3**	**-**	**-**	**9**	**-**	**-**	**10**	**-**	**5**	**2**
	Agree	13	-	16	-	-	18	-	-	14	-	11	11
	Strongly agree	23	-	15	-	-	24	-	-	29	-	19	18
	Completely agree	60	-	67	-	-	46	-	-	45	-	65	69
	Favorable responses	**95**	**-**	**97**	**-**	**-**	**88**	**-**	**-**	**88**	**-**	**95**	**98**
	No opinion	0	-	0	-	-	3	-	-	2	-	0	0

Curricular Unit: **From Clinical to Molecular Biology II**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	10	10	6	6	10	10	10	6	6	6	10	10
	Strongly disagree	0	0	3	0	0	0	0	3	3	3	3	0
	Disagree	3	6	6	0	3	6	6	6	10	0	16	10
	Unfavorable responses	**13**	**16**	**16**	**6**	**13**	**16**	**16**	**16**	**19**	**10**	**29**	**19**
	Agree	29	23	35	29	23	26	26	23	26	32	29	35
	Strongly agree	45	45	29	42	45	35	29	35	39	29	29	32
	Completely agree	13	16	19	23	16	19	29	19	13	26	10	13
	Favorable responses	**87**	**84**	**84**	**94**	**84**	**81**	**84**	**77**	**77**	**87**	**68**	**81**
	No opinion	0	0	0	0	3	3	0	6	3	3	3	0
2012/2013	**Unfavorable responses**	**38**	**41**	**44**	**21**	**49**	**26**	**24**	**23**	**39**	**25**	**63**	**53**
	Favorable responses	**58**	**50**	**53**	**73**	**43**	**63**	**73**	**68**	**50**	**63**	**31**	**41**
	No opinion	5	9	4	6	9	11	4	10	11	13	6	6

Curricular Unit: **Vertical Domains V**

Overall Evaluation

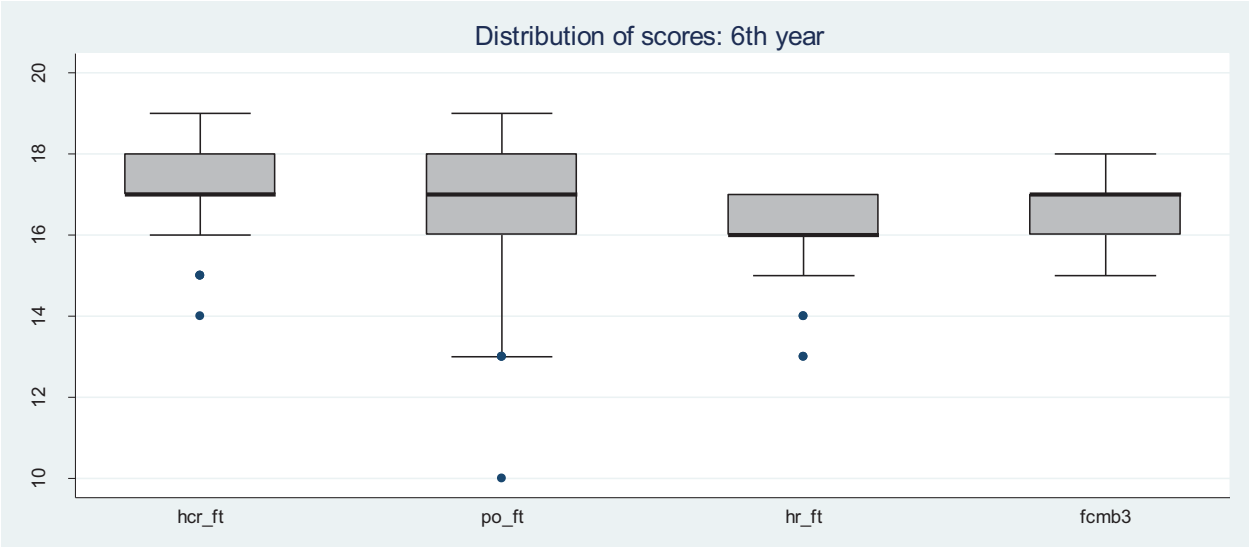
Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	3	3	4	1	6	–	3	2	3	–	4	5
	Strongly disagree	0	0	0	2	0	–	1	1	2	–	1	2
	Disagree	3	7	5	2	7	–	2	0	4	–	6	10
	Unfavorable responses	**6**	**10**	**9**	**5**	**12**	**–**	**6**	**3**	**8**	**–**	**10**	**17**
	Agree	23	21	26	25	25	–	21	25	16	–	17	20
	Strongly agree	36	33	35	33	28	–	37	36	36	–	34	32
	Completely agree	36	34	30	35	32	–	33	33	36	–	39	30
	Favorable responses	**94**	**89**	**90**	**93**	**85**	**–**	**91**	**94**	**88**	**–**	**90**	**83**
	No opinion	0	2	1	2	3	–	3	3	4	–	0	0
2012/2013	**Unfavorable responses**	**9**	**6**	**11**	**3**	**3**	**-**	**3**	**0**	**9**	**-**	**6**	**14**
	Favorable responses	**89**	**86**	**89**	**97**	**77**	**-**	**97**	**97**	**83**	**-**	**94**	**83**
	No opinion	3	9	0	0	20	-	0	3	9	-	0	3

6TH YEAR

	SCIENTIFIC AREA	CURRICULAR UNITS	ECTS	AVAILABLE
5th year	SC-CSH	Health Centre Residency - Final Training	10,5	✓
	C	Hospital Residencies - Final Training	39,5	✓
	C / P / CBB	From the Clinic to Molecular Biology III	3	✓
	CBB / SC-CSH / P / C	Option Projects - Final Training	7	✓
		TOTAL	60	

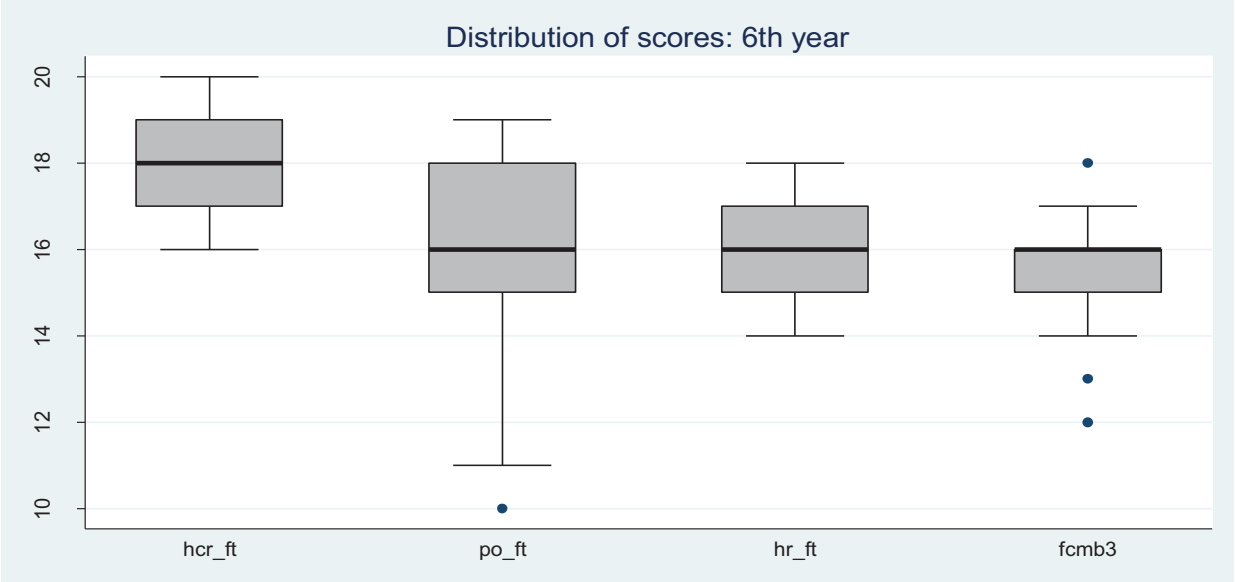
Distribution of Student Scores(*)

2012-2013



Failure	1(1%)	4(5%)	0(0%)	1 (1%)

2013-2014



Failure	0 (0%)	3 (3%)	0 (0%)	6 (6%)

Legend
HCR_FT – Health Centers Residency - Final Training
PO_FT – Option Projects - Final Training
HR_FT – Hospital Residencies - Final Training
FCMB3 – From Clinical to Molecular Biology III

(*) Output provided by the database of ECS-UM Longitudinal Study.

Curricular Unit: **Health Centers Residency – Final Training**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	0	5	0	0	0	0	5	0	0	0	0	0
	Strongly disagree	0	0	0	0	0	0	5	0	5	0	0	0
	Disagree	0	9	0	5	5	5	23	5	0	18	0	0
	Unfavorable responses	**0**	**14**	**0**	**5**	**5**	**5**	**32**	**5**	**5**	**18**	**0**	**0**
	Agree	14	23	9	18	27	27	23	36	14	27	32	14
	Strongly agree	59	45	32	50	41	45	23	41	41	41	45	32
	Completely agree	27	18	59	27	27	23	18	18	41	14	23	55
	Favorable responses	**100**	**86**	**100**	**95**	**95**	**95**	**64**	**95**	**95**	**82**	**100**	**100**
	No opinion	0	0	0	0	0	0	5	0	0	0	0	0
2012/2013	**Unfavorable responses**	**7**	**21**	**10**	**9**	**15**	**24**	**24**	**15**	**7**	**31**	**22**	**12**
	Favorable responses	**90**	**76**	**87**	**88**	**81**	**67**	**72**	**79**	**87**	**64**	**73**	**85**
	No opinion	3	3	3	3	4	9	4	6	6	4	4	3

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	0	1	0	0	1	0	0	2	2	0
	Strongly disagree	0	1	2	0	1	1	0	1	0	0
	Disagree	1	1	1	5	1	1	4	1	2	3
	Unfavorable responses	**1**	**4**	**4**	**5**	**4**	**2**	**4**	**5**	**5**	**3**
	Agree	16	9	6	10	7	14	10	5	9	10
	Strongly agree	36	26	27	33	31	28	31	27	27	29
	Completely agree	47	62	63	52	56	54	54	63	58	59
	Favorable responses	**99**	**96**	**96**	**95**	**94**	**96**	**95**	**95**	**94**	**98**
	No opinion	0	0	0	0	2	1	1	0	1	0
2012/2013	**Unfavorable responses**	**6**	**5**	**2**	**3**	**3**	**8**	**3**	**3**	**3**	**3**
	Favorable responses	**94**	**94**	**98**	**97**	**97**	**92**	**97**	**97**	**92**	**97**
	No opinion	0	2	0	0	0	0	0	0	5	0

Curricular Unit: **Hospital Residencies - Final Training**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	In process											
	Strongly disagree												
	Disagree												
	Unfavorable responses												
	Agree												
	Strongly agree												
	Completely agree												
	Favorable responses												
	No opinion												
2012/2013	**Unfavorable responses**												
	Favorable responses												
	No opinion												

Evaluation of Clinical Tutors/Services

Tutors/Services		1	2	3	4	5	6	7	8	9	10
2013/2014	Completely disagree	In process									
	Strongly disagree										
	Disagree										
	Unfavorable responses										
	Agree										
	Strongly agree										
	Completely agree										
	Favorable responses										
	No opinion										
2012/2013	**Unfavorable responses**										
	Favorable responses										
	No opinion										

Curricular Unit: **From Clinical to Molecular Biology III**

Overall Evaluation

Curricular Unit (nuclear items)		1	2	3	4	5	6	7	8	9	10	11	12
2013/2014	Completely disagree	15	12	19	4	23	4	8	4	15	8	42	31
	Strongly disagree	15	12	8	4	12	27	4	12	12	4	8	15
	Disagree	15	27	23	15	19	0	15	8	4	12	15	15
	Unfavorable responses	**46**	**50**	**50**	**23**	**54**	**31**	**27**	**23**	**31**	**23**	**65**	**62**
	Agree	23	19	27	15	19	15	27	23	27	35	12	8
	Strongly disagree	19	15	15	38	12	27	27	27	19	15	12	15
	Completely agree	8	4	4	12	4	12	15	15	8	15	4	4
	Favorable responses	**50**	**38**	**46**	**65**	**35**	**54**	**69**	**65**	**54**	**65**	**27**	**27**
	No opinion	4	12	4	12	12	15	4	12	15	12	8	12
2012/2013	**Unfavorable responses**	**26**	**24**	**32**	**22**	**32**	**16**	**14**	**18**	**18**	**16**	**44**	**34**
	Favorable responses	**70**	**70**	**62**	**74**	**64**	**76**	**82**	**78**	**76**	**72**	**46**	**62**
	No opinion	4	6	6	4	4	8	4	4	6	12	10	4

Curricular Unit: **Option Projects - Final Training**

Overall Evaluation

Curricular Unit		1	2	3	4	5	6	7	8
2013/2014	Completely disagree	0	2	1	4	65	2	0	2
	Strongly disagree	0	0	1	1	13	4	0	0
	Disagree	1	4	4	7	9	18	4	10
	Unfavorable responses	**1**	**6**	**6**	**12**	**86**	**24**	**4**	**12**
	Agree	21	23	21	21	3	23	23	26
	Strongly agree	44	38	43	40	9	24	30	28
	Completely agree	33	20	20	24	3	23	43	30
	Favorable responses	**98**	**80**	**83**	**85**	**14**	**71**	**96**	**84**
	No opinion	1	13	11	2	0	5	0	4
2012/2013	**Unfavorable responses**	**0**	**4**	**3**	**4**	**45**	**13**	**0**	**4**
	Favorable responses	**100**	**91**	**93**	**94**	**54**	**85**	**99**	**94**
	No opinion	0	4	4	1	2	1	1	1

MASTER IN MEDICINE

University of Minho
School of Health Sciences

STUDENTS ADMITTED/REGISTERED 2013/2014

Students Admitted/Registered Index

PURPOSE

This document presents a socio-demographic descriptive analysis of the students registered in the Medical degree of the School of Health Sciences of University of Minho. The document compares the new class of 2013/2014 incoming students with all students from previous years, offering a perspective on the evolution of the sociodemography of Minho's students. The data were collected by Medical Education Unit at the moment of students' admission, as part of the Longitudinal Study of the School of Health Sciences.

ORGANIZATION

The document presents tables with descriptive statistics (number and percentage) for individual socio-demographic variables. The tables also present the numbers and Sample (representativeness) rates for individual classes, and for the total sample, in the columns shaded in gray (Sample (representativeness)). Rates below 100% reflect the existence of "missing values" in the longitudinal study data.

Table 1 shows the total numbers to consider (for students with valid registrations) in the calculation of the percentage of collection of variables (excluding Table 2 and Table 3).

In order to compare students who entered medical school in the academic year 2013/2014 with all students who entered the school years earlier, and since no significant differences were found between the various classes[1], a single group was formed with students who entered medical school between the academic years 2001/2002 and 2012/2013.

This document presents descriptive statistics for the original track and the alternative track[2].

Used abbreviations:

SHS/UM – School of Health Sciences of University of Minho

NAP – National Admission Process

SAR – Special Admission Regimes

SAP – Special Admission Process

GPA – Grade Point Average

[1] Available in the document "A Snapshot, assessment of the academic year: October, 2012.

[2] Starting 2011/2012 years 1, 2 and 3 of the Medical degree of the School of Health Sciences (corresponding to the degree in Basic Sciences of the Medicine) are organized in 2 distinct Study Plans: (1) Original Track: for students who had not been admitted to the track of Medicine through the Graduate Entry Process to the track of Medicine for graduates; (2) Alternative Track: for the students who had been admitted to the track of Medicine the Special Admission Process to the track of Medicine for graduates (Decreto-Lei n.º 40/2007 de 20 de Fevereiro).

REFERENCE SAMPLE: registered students

Table 1: Population totals used in representativeness calculations across the document

Track	Forms of Admission	Admission academic years		
		2001/2013	2013/2014	Total
Original	NAP: general contingent – 1st phase	915	109	1024
	NAP: general contingent – 2nd phase	8	7	15
	NAP: general contingent – 3rd phase	2	1	3
	NAP: general contingent - complaints	2	0	2
	NAP: general contingent	**927**	**117**	**1044**
	NAP: islands contingent– 1st phase	58	1	59
	NAP: handicapped contingent– 1st phase	15	0	15
	NAP: emigrants contingent– 1st phase	19	1	20
	NAP: military contingent– 1st phase	4	0	4
	NAP: other contingents: complaints	4	0	4
	NAP: All contingents – 1st phase	**1011**	**111**	**1122**
	Total National Admission Process	**1027**	**119**	**1146**
	SAR: athletes	15	0	15
	SAR: diplomats	3	0	3
	SAR: Portuguese Speaking African Countries	4	2	6
	SAR: Timor	1	0	1
	SAR: Total	23	2	25
	SAP: graduates	24	0	24
	Transfers	5	1	6
	Reinstatement	2	1	3
	Extraordinary Legislation	2	0	2
	Total of other processes of admission	56	4	60
	Total	1083	123	1206
Alternative	SAP: graduate-entry students**	39	17	58
	Reinstatement	1	0	1
	Aveiro	0	10	10
	Total	40	27	69
Original & Alternative	Total	1123	150	1273

* the alternative track began in 2011/2012.

RESULTS

A. ORIGINAL AND ALTERNATIVE TRACKS

A.1. ADMITTED STUDENTS

Table 2: Admitted students: all

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
NAP: general contingent	947	83%	126	77%	1073	82%
NAP: general contingent – 1st phase	934	81%	118	72%	1052	80%
NAP: general contingent – 2nd phase	9	1%	7	4%	16	1%
NAP: general contingent – 3rd phase	2	0%	1	1%	3	0%
NAP: general contingent – complaints	2	0%	0	0%	2	0%
NAP: islands contingent	59	5%	1	1%	60	5%
NAP: handicapped contingent	18	2%	0	0%	18	1%
NAP: emigrants contingent	20	2%	1	1%	21	2%
NAP: military contingent	4	0%	0	0%	4	0%
NAP: All contingents – 1st phase	1031	90%	121	74%	1152	88%
NAP: All contingents – 2nd phase	9	1%	7	4%	16	1%
NAP: All contingents – 3rd phase	2	0%	1	1%	3	0%
NAP: All contingents – complaints	6	1%	0	0%	6	0%
Total National Admission Process	1048	91%	128	79%	1176	90%
SAR: athletes	15	1%	0	0%	15	1%
SAR: diplomats	3	0%	0	0%	3	0%
SAR: Portuguese Speaking African Countries	4	0%	2	1%	6	0%
SAR: Timor	1	0%	0	0%	1	0%
SAP: graduates	66	6%	21	13%	77	6%
Reinstatement	3	0%	1	1%	4	0%
Transfers	5	0%	11	7%	16	1%
Extraordinary legislation	2	0%	0	0%	2	0%
Total of other processes of admission	99	9%	35	21%	124	9%
Sample (representativeness)	1147	100%	163	100%	1310	100%

Table 3: Admitted students: registrations

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
Did not register	6	1%	6	4%	12	1%
Registered but applied for transfer during the 1st year	5	0%	4	2%	9	1%
Registered but changed degrees in another phase of the NAP	7	1%	2	1%	9	1%
Registered but canceled registration	6	0%	1	1%	7	1%
Total of invalid registrations	24	2%	13	8%	37	3%
Total of valid registrations	1123*	98%	150*	92%	1273*	97%
Sample (representativeness)	1147	100%	163	100%	1310	100%

* Includes Readmission: 2 in 2011/2012; 1 in 2012/2013; 1 in 2013/2014

A.2. REGISTERED STUDENTS

Table 4: Admission Process

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
NAP: general contingent	927	83%	117	78%	1044	82%
NAP: islands contingent	59	5%	1	1%	60	5%
NAP: handicapped contingent	18	2%	0	0%	18	1%
NAP: emigrants contingent	19	2%	1	1%	20	2%
NAP: military contingent	4	0%	0	0%	4	0%
Total National Admission Process	**1027**	**92%**	**119**	**79%**	**1146**	**90%**
SAR: athletes	15	1%	0	0%	15	1%
SAR: diplomats	3	0%	0	0%	3	0%
SAR: Portuguese Speaking African Countries	4	0%	2	1%	6	0%
SAR: Timor	1	0%	0	0%	1	0%
SAP: graduates	63	6%	17	11%	80	6%
Reinstatement	3	0%	1	1%	4	0%
Transfers	5	0%	11	7%	16	1%
Extraordinary legislation	2	0%	0	0%	2	0%
Total of other processes of admission	**96***	**8%**	**31***	**21%**	**127***	**10%**
Sample (representativeness)	1123*	100%	150*	100%	1273*	100%

* Includes Readmission: 2 in 2011/2012; 1 in 2012/2013; 1 in 2013/2014

B. ORIGINAL TRACK

B.1. NATIONAL ADMISSION PROCESS: 1st phase: registered students

Table 5: Students' option for SHS/UM: all NAP contingents: (The SHS/UM was my # option)

Academic Year of Admission	1st option		2nd option		3rd option		Other option		Sample (representativeness)	
	N	%	N	%	N	%	N	%	N	%
2001/2013	712	70%	111	11%	169	17%	19	2%	1011	100%
2013/2014	76	68%	19	17%	16	15%	0	0%	111	100%
Total	788	70%	130	12%	185	16%	19	2%	1122	100%

Table 6: Students' option for SHS/UM: NAP general contingent (The SHS/UM was my # option)

Academic Year of Admission	1st option		2nd option		3rd option		Other option		Sample (representativeness)	
	N	%	N	%	N	%	N	%	N	%
2001/2013	667	73%	81	9%	163	18%	4	0%	915	100%
2013/2014	75	69%	18	17%	16	15%	0	0%	109	100%
Total	742	72%	99	10%	179	17%	4	0%	1024	100%

Table 7: Grade point average: all contingents

Academic Year of Admission	Mean	Standard deviation	Minimum	Maximum	Sample (representativeness)	
					N	%
2001/2013	184,08	7,84	140,20	197,30	1011	100%
2013/2014	182,38	3,90	165,80	192,80	111	100%
Total	183,91	7,56	140,20	197,30	1122	100%

Table 8: Grade point average: general contingent

Academic Year of Admission	Mean	Standard deviation	Minimum	Maximum	Sample (representativeness)	
					N	%
2001/2013	186,18	3,21	181,00	197,30	915	100%
2013/2014	182,63	3,42	179,20	192,80	109	100%
Total	185,80	3,41	179,20	197,30	1024	100%

Figure 1: Grade point average: general contingent vs other contingents

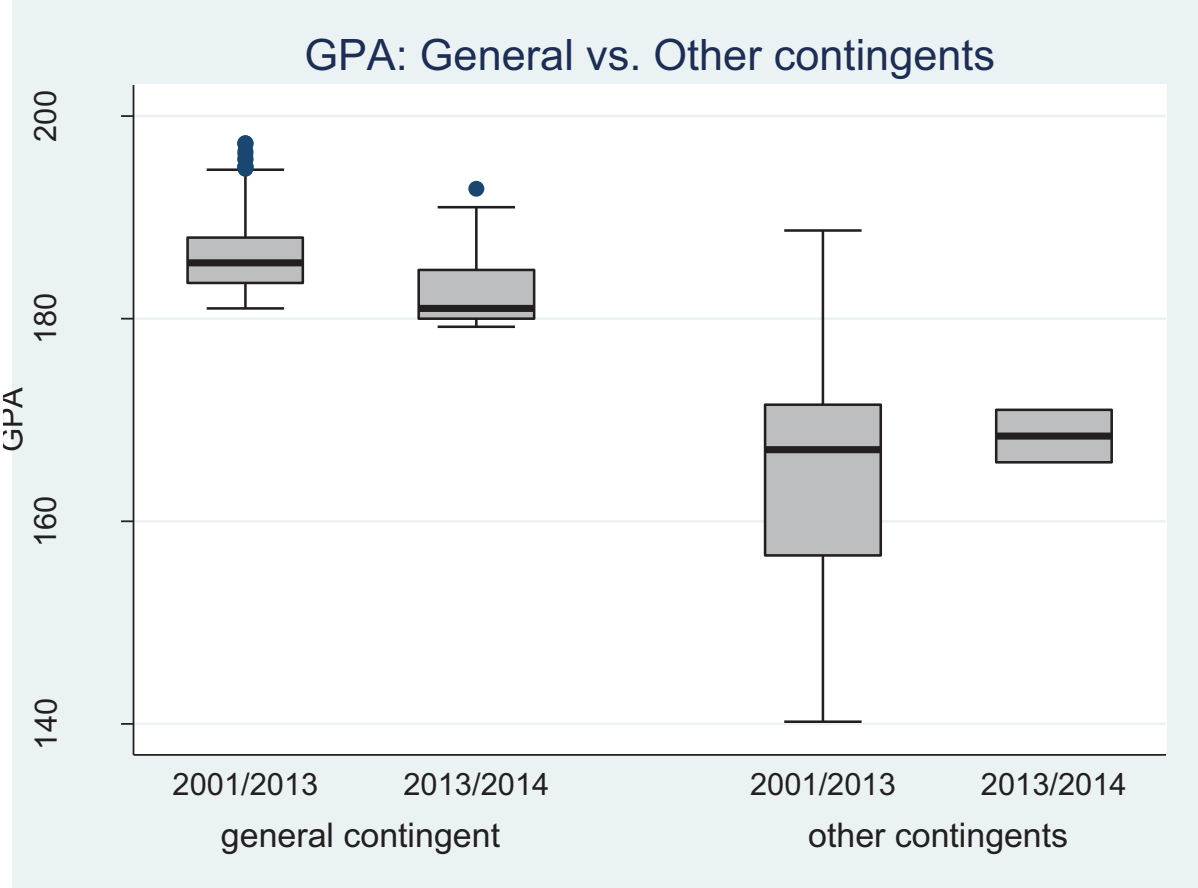


Table 9: Type of secondary school where the student completed the 12th year: all contingents

Academic Year of Admission	public		private		Sample (representativeness)	
	N	%	N	%	N	%
2001/2013	464	69%	206	31%	670	66%
2013/2014	62	61%	39	39%	101	91%
Total	526	68%	245	32%	771	69%

Table 10: Type of secondary school where the student completed the 12th year: general contingent

Academic Year of Admission	public		private		Sample (representativeness)	
	N	%	N	%	N	%
2001/2013	422	69%	188	31%	610	67%
2013/2014	60	61%	39	39%	99	91%
Total	482	68%	227	32%	709	69%

B.2. All ADMISSION PROCESSES: all registered students

Table 11: Students' Gender

Academic Year of Admission	Female		Male		Sample (representativeness)	
	N	%	N	%	N	%
2001/2012	714	66%	369	34%	1083	100%
2012/2013	85	69%	38	31%	123	100%
Total	799	66%	407	34%	1206	100%

Table 12: Students' age

	Academic Year of Admission																	
	2001/2013						2013/2014						Total					
	N	%	M	DP	Min	Max	N	%	M	DP	Min	Max	N	%	M	DP	Min	Max
NAP	1013	95%	18.77	1.41	16	38	105	97%	18.92	1.29	17	28	1118	95%	18.78	1.40	16	38
SAR	23	2%	18.45	0.88	17	21	2	2%	18.60	0.02	18	18	25	2%	18.46	0.84	17	21
SAP: graduated	23	2%	28.57	3.32	24	40	-	-	-	-	-	-	23	2%	28.57	3.32	24	40
Transfers and Reinstatement	7	1%	24.58	4.46	17	29	1	1%	21.10	-	21	21	8	1%	24.14	4.31	17	29
Extraordinary legislation	2	0%	18.84	0.15	18	18	-	-	-	-	-	-	2		18.84	0.15	18	18
Sample (representativeness)	1068	99%	19.01	2.12	16	40	108	88%	18.93	1.29	17	28	1176	98%	19.01	2.06	16	40

Table 13: Students' nationality

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
Canadian	5	1%	0	0%	5	0%
Danish	0	0%	1	1%	1	0%
Angolan	0	0%	1	1%	1	0%
American	0	0%	1	1%	1	0%
Russian	1	0%	0	0%	1	0%
Cape Verdean	2	0%	0	0%	2	0%
Timorese	1	0%	0	0%	1	0%
Santoméan	1	0%	0	0%	1	0%
Australian	0	0%	1	1%	1	0%
Cuban	1	0%	0	0%	1	0%
All other Nationalities	11	1%	4	4%	15	1%
Portuguese	916	99%	107	96%	1023	99%
Sample (representativeness)	927	86%	111	90%	1038	86%

Table 14: District of origin

Academic Year of Admission	Braga		Porto		Others		Sample (representativeness)	
	N	%	N	%	N	%	N	%
2001/2013	635	59%	212	20%	227	21%	1074	99%
2013/2014	67	59%	30	26%	17	15%	114	93%
Total	702	59%	242	20%	244	21%	1188	99%

Table 15: Students' admission: moving away from the family home (Coming to the SHS/UM meant I had to leave the family home)

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	**%**	N		N	**%**
2001/2013	526	51%	496	49%	1022	94%
2013/2014	56	51%	53	49%	109	89%
Total	582	51%	549	49%	1131	94%

Table 16: Students' registration in higher education: 1st time

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	**%**	N		N	**%**
2001/2013	296	28%	760	72%	1056	98%
2013/2014	44	39%	68	61%	112	91%
Total	340	29%	828	71%	1168	97%

Table 17: Factors that influenced students' decision to choose the medical degree (1st factor to 4th factor)

		Academic Year of Admission					
		2001/2013		2013/2014		Total	
		N	%*	N	%*	N	%*
To have the required classifications	1st factor	61	6%	5	4%	66	5%
	Total	605	56%	80	65%	685	57%
The track match my educational/ professional/vocational interests	1st factor	880	81%	101	82%	981	81%
	Total	1011	93%	111	90%	1122	93%
Family tradition	1st factor	17	2%	0	0%	17	1%
	Total	95	9%	8	7%	103	9%
Friends influence	1st factor	18	2%	0	0%	18	1%
	Total	278	26%	14	11%	292	24%
Parents and/or relatives influence	1st factor	23	2%	2	2%	25	2%
	Total	601	55%	65	53%	666	55%
Former or actual students information	1st factor	13	1%	2	2%	15	1%
	Total	397	37%	56	46%	453	38%
Dissatisfaction with the previous/current professional activity	1st factor	0	0%	0	0%	0	0%
	Total	7	1%	0	0%	7	1%
Aspiration for a stable professional future	1st factor	0	0%	0	0%	0	0%
	Total	3	0%	0	0%	3	0%
Other	1st factor	18	2%	1	1%	19	2%
	Total	125	12%	8	7%	133	11%

Total: total of students who check this option as 1st, 2nd, 3rd or 4th factor.

* Students sample differ for each one of the items. Proportions calculated considering the total number of students admitted.

Table 18: Factors that influenced students' decision to choose SHS/UM (1st factor to 4th factor)

		Academic Year of Admission					
		2001/2013		2013/2014		Total	
		N	%*	N	%*	N	%*
Geographical proximity	1st factor	465	43%	62	50%	527	44%
	Total	853	79%	100	81%	953	79%
Geographical proximity of relatives	1st factor	23	2%	1	2%	24	2%
	Total	80	7%	5	4%	85	7%
Economic resources owned	1st factor	32	3%	2	2%	34	3%
	Total	174	16%	19	15%	193	16%
Grade point average in the previous year	1st factor	48	4%	6	5%	54	4%
	Total	209	19%	30	24%	239	20%
Extracurricular academic life	1st factor	28	3%	0	0%	28	2%
	Total	155	14%	8	7%	163	14%
Quality of learning/teaching process	1st factor	263	24%	20	16%	283	23%
	Total	736	68%	77	63%	813	67%
Prestige of the degree	1st factor	91	8%	9	7%	100	8%
	Total	538	50%	74	60%	612	51%
I liked the curriculum of the degree	1st factor	71	7%	4	3%	75	6%
	Total	353	33%	12	10%	366	30%
I liked the learning/teaching methods	1st factor	92	8%	1	1%	93	8%
	Total	399	28%	28	23%	427	27%
Friends influence	1st factor	17	2%	1	1%	18	1%
	Total	138	13%	8	7%	146	12%
Parents and/or relatives influence	1st factor	32	3%	2	2%	34	3%
	Total	248	23%	28	23%	276	23%
Former or actual students information	1st factor	14	1%	1	1%	15	1%
	Total	160	15%	19	15%	179	15%
Method of selection	1st factor	0	0%	0	0%	0	0%
	Total	0	0%	0	0%	0	0%
Track duration	1st factor	0	0%	0	0%	0	0%
	Total	3	0%	0	0%	3	0%
Other	1st factor	18	2%	1	1%	19	2%
	Total	39	4%	4	3%	43	4%

Total: total of students who check this option as 1st, 2nd, 3rd or 4th factor.

* Students sample differ for each one of the items. Proportions calculated considering the total number of registered students

Table 19: The student says he is familiar with the SHS/UM medical curriculum

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2001/2013	403	39%	625	61%	1028	95%
2013/2014	55	50%	56	50%	111	90%
Total	458	40%	681	60%	1139	94%

Table 20: Next academic year: the student intends to stay in the medical degree

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2001/2013	8	1%	1014	99%	1022	94%
2013/2014	0	0%	111	100%	111	90%
Total	8	1%	1125	99%	1133	94%

Table 21: Next academic year: the student intends to stay in the same university

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2001/2013	36	3%	968	97%	1004	93%
2013/2014	6	5%	105	95%	111	90%
Total	42	4%	1073	96%	1115	92%

Table 22: Difficulties/problems anticipated by students

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%*	N	%*	N	%*
Difficulties/problems: economic	188	17%	11	9%	199	17%
Difficulties/problems: learning / performance	334	31%	42	34%	376	31%
Difficulties/problems: time management	824	76%	88	72%	912	76%
Difficulties/problems: money management	140	13%	15	12%	155	13%
Difficulties/problems: relationship with colleagues	75	7%	12	10%	87	7%
Difficulties/problems: relationship with teachers	19	2%	3	2%	22	2%
Difficulties/problems: relationship with family/boyfriend/girlfriend	142	13%	21	17%	163	14%
Difficulties/problems: of health (headaches, tiredness, nourishment...)	183	17%	26	21%	209	17%
Difficulties/problems: psychological (isolation, anxiety, depression...)	232	21%	26	21%	258	21%
Difficulties/problems: daily routine organization (nourishment, hygiene...)	176	16%	22	18%	198	16%
Difficulties/problems: other	15	1%	1	1%	16	1%

* Students sample differ for each one of the items. Proportions calculated considering the total number of registered students.

Table 23: Students' educational background on admission

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
Secondary school	1023	97%	110	98%	1133	97%
Higher education - bachelor	3	0%	0	0%	3	0%
Higher education – "licenciatura"	20	2%	2	2%	22	2%
Postgraduate - Master	4	0%	0	0%	4	0%
Postgraduate - PhD	5	0%	0	0%	5	0%
Sample (representativeness)	1055	95%	112	79%	1167	94%

Table 24: Students' employment status on admission

I intend to maintain that professional situation,		Without professional activity		Part-time worker		Full-time worker		Sample (representativeness)	
		N	%	N	%	N	%	N	%
2001/2013	In the first 3 years	681	96%	23	3%	10	1%	714	66%
	In the last 3 years	621	97%	13	2%	5	1%	639	59%
2013/2014	In the first 3 years	83	100%	0	0%	0	0%	83	67%
	In the last 3 years	76	100%	0	0%	0	0%	76	62%
Total	In the first 3 years	764	96%	23	3%	10	1%	797	66%
	In the last 3 years	697	98%	13	2%	5	0%	715	59%

Table 25: Student's father educational background

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
No qualifications	0	0%	0	0%	0	0%
1st cycle of basic education	142	14%	10	9%	152	13%
2nd cycle of basic education	90	9%	6	5%	96	8%
3rd cycle of basic education	155	15%	20	18%	175	15%
High school	240	23%	30	27%	270	23%
higher education - bachelor	59	6%	1	1%	60	5%
higher education – "licenciatura"	287	27%	32	29%	319	27%
Postgraduate - Master	53	5%	8	7%	61	5%
Postgraduate - PhD	24	2%	4	4%	28	2%
Sample (representativeness)	1050	97%	111	90%	1161	96%

Table 26: Student's father professional category

	Academic Year of Admission					
	2001/2013		2013/2014		Total	
	N	%	N	%	N	%
Senior public administration, etc.	132	13%	10	10%	142	13%
Experts in intellectual and scientific professions	333	33%	29	30%	362	32%
Technicians	91	9%	13	13%	104	9%
Administrative staff and similar	76	8%	6	6%	82	7%
Service workers and salesmen	146	14%	18	18%	164	15%
Farmers and skilled workers in agriculture and fishing	9	1%	2	2%	11	1%
Workers, craftsmen and related workers	100	10%	10	10%	110	10%
Plant and machine operators and assembly workers	28	3%	2	2%	30	3%
Military	30	3%	1	1%	31	3%
Undifferentiated workers	69	6%	11	11%	80	7%
Sample (representativeness)	1014	94%	102	83%	1114	93%

Table 27: Student's mother educational background

	Academic Year of Admission					
	2001/2011		2012/2013		Total	
	N	%	N	%	N	%
No qualifications	0	0%	0	0%	0	0%
1st cycle of basic education	123	12%	10	9%	133	11%
2nd cycle of basic education	84	8%	7	6%	91	8%
3rd cycle of basic education	127	12%	9	8%	136	12%
High school	187	18%	27	24%	214	18%
Higher education - bachelor	94	9%	3	3%	97	8%
Higher education – "licenciatura"	368	35%	47	42%	415	36%
Postgraduate - Master	58	5%	6	5%	64	5%
Postgraduate - PhD	15	1%	2	2%	17	1%
Sample (representativeness)	1056	98%	111	90%	1167	97%

Table 28: Student's mother professional category

	Academic Year of Admission					
	2001/2012		2012/2013		Total	
	N	%	N	%	N	%
Senior public administration, etc.	60	6%	5	5%	65	6%
Experts in intellectual and scientific professions	452	47%	48	48%	500	47%
Technicians	57	6%	6	6%	63	6%
Administrative staff and similar	136	14%	16	16%	152	14%
Service workers and salesmen	93	10%	11	11%	104	10%
Farmers and skilled workers in agriculture and fishing	10	1%	1	1%	11	1%
Workers, craftsmen and related workers	66	7%	7	7%	73	7%
Plant and machine operators and assembly workers	5	1%	0	0%	5	0%
Military	0	0%	0	0%	0	0%
Undifferentiated workers	86	9%	7	7%	94	9%
Sample (representativeness)	965	89%	101	82%	1066	88%

C. ALTERNATIVE TRACK

C.1. REGISTERED STUDENTS:

Table 29: Admission Process: all registered students

	Academic Year of Admission							
	2011/2012		2012/2013		2013/2014		Sample (representativeness)	
	N	%	N	%	N	%	N	%
SAP: graduates	20	36%	19	34%	17	30%	56	100%
Transfers: Aveiro	0	0%	0	0%	10	100%	10	100%
Reinstatement	1	100%	0	0%	0	0%	1	100%
Total	21	30%	19	29%	27	41%	67	100%

C.2. REGISTERED STUDENTS: all registered students: except extraordinary Aveiro Transfers

Table 30: Information about previous degrees

Academic Year of Admission	Number of curricular years of previous degree					Number of years it took to complete the previous degree					Note of previous track final grade				
	N	%	Min.	Max.	Mean	N	%	Min.	Max.	Mean	N	%	Min.	Max.	Mean
2011/2012	20	37%	4	6	4.4	20	37%	4	6	4.5	20	38%	14	17	15.0
2012/2013	17	31%	3	6	4.6	17	31%	3	6	4.6	17	32%	14	17	15.1
2013/2014	17	31%	3	6	4.4	17	31%	3	6	4.6	16	30%	14	18	14.9
Sample (representativeness)	54	91%	3	6	4.6	54	91%	3	6	4.6	53	90%	14	18	15.0

Table 31: My previous degree was my # option

Academic Year of Admission	1st Option		2nd Option		3rd Option		Another Option		Sample (representativeness)	
	N	%	N	%	N	%	N	%	N	%
2011/2012	8	40%	9	45%	0	0%	3	15%	20	95%
2012/2013	5	29%	7	41%	1	6%	4	24%	17	89%
2013/2014	7	41%	6	35%	1	6%	3	18%	17	100%
Total	20	37%	22	41%	2	4%	10	19%	54	95%

Table 32: Medical Degree: When admitted to the previous degree, Medicine was my # option

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	12	60%	8	40%	20	95%
2012/2013	8	47%	9	53%	17	89%
2013/2014	10	59%	7	41%	17	100%
Total	30	56%	24	44%	54	95%

Table 33: Students' option for SHS/UM: The SHS/UM was my # option

Academic Year of Admission	1st Option		2nd Option		3rd Option		Another Option		Sample (representativeness)	
	N	%	N	%	N	%	N	%	N	%
2011/2012	12	63%	0	0%	1	5%	6	32%	19	90%
2012/2013	1	5%	0	0%	0	0%	18	95%	19	100%
2013/2014	11	65%	1	6%	0	0%	5	29%	17	100%
Total	24	44%	1	2%	1	2%	29	52%	55	96%

Table 34: Present year: The student applied to other medical degrees

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	10	50%	10	50%	20	95%
2012/2013	7	41%	10	59%	17	89%
2013/2014	12	71%	5	29%	17	100%
Total	29	54%	25	46%	54	95%

Table 35: Factors that influenced students' decision to choose the medical degree (1st factor to 4th factor)

		Academic Year of Admission							
		2011/2012		2012/2013		2013/2014		Total	
		N	%*	N	%*	N	%*	N	%*
To have the required classifications	1st factor	0	0%	2	11%	0	0%	2	4%
	Total	0	0%	2	11%	0	0%	2	4%
The track match my educational/	1st factor	18	86%	14	74%	16	94%	48	84%
professional/vocational interests	Total	20	95%	15	79%	16	94%	51	89%
Family tradition	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	1	5%	0	0%	1	6%	2	4%
Friends influence	1st factor	1	5%	0	0%	0	0%	1	2%
	Total	2	10%	2	12%	2	11%	6	12%
Parents and/or relatives influence	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	8	38%	8	42%	4	24%	20	35%
Former or actual students information	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	12	57%	4	51%	9	53%	25	44%
Dissatisfaction with the previous/current	1st factor	0	0%	0	0%	0	0%	0	0%
professional activity	Total	15	71%	13	68%	10	59%	38	67%
Aspiration for a stable professional future	1st factor	1	5%	1	5%	0	0%	2	4%
	Total	18	86%	13	68%	14	82%	45	79%
Other	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	0	0%	0	0%	0	0%	0	0%

* Students sample differ for each one of the items. Proportions calculated considering the total number of students admitted (2011/2012:20; 2012/2013:18).

Table 36: Factors that influenced students' decision to choose SHS/UM (1st factor to 4th factor)

		Academic Year of Admission							
		2011/2012		2012/2013		2013/2014		Total	
		N	%*	N	%*	N	%*	N	%*
Geographical proximity	1st factor	4	19%	4	21%	6	35%	14	25%
	Total	12	57%	12	63%	9	53%	33	58%
Geographical proximity of relatives	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	2	10%	1	5%	0	0%	3	5%
Economic resources owned	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	2	10%	2	11%	1	6%	5	9%
Grade point average in the previous year	1st factor	0	0%	4	21%	0	0%	4	7%
	Total	0	0%	12	63%	0	0%	12	21%
Extracurricular academic life	1st factor	0	0%	2	11%	0	0%	2	4%
	Total	0	0%	6	32%	0	0%	6	11%
Quality of learning/teaching process	1st factor	5	24%	1	5%	5	29%	11	19%
	Total	14	67%	8	42%	13	76%	35	61%
Prestige of the degree	1st factor	1	5%	3	16%	2	12%	6	11%
	Total	10	48%	10	53%	10	59%	30	53%
I liked the curriculum of the degree	1st factor	1	5%	0	0%	2	12%	3	5%
	Total	7	33%	0	0%	8	47%	15	26%
I liked the learning/teaching methods	1st factor	3	14%	0	0%	3	18%	6	11%
	Total	13	62%	1	5%	6	35%	20	35%
Friends influence	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	2	10%	2	11%	0	0%	4	7%
Parents and/or relatives influence	1st factor	0	0%	2	11%	0	0%	2	4%
	Total	0	0%	5	26%	1	6%	6	11%
Former or actual students information	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	3	14%	3	16%	0	0%	6	11%
Method of selection	1st factor	6	29%	0	0%	0	0%	6	11%
	Total	12	57%	2	11%	6	35%	20	35%
Track duration	1st factor	0	0%	2	11%	1	6%	3	5%
	Total	1	5%	4	21%	10	59%	15	26%
Other	1st factor	0	0%	0	0%	0	0%	0	0%
	Total	0	0%	0	0%	0	0%	0	0%

Total: total of students who check this option as 1st, 2nd, 3rd or 4th factor.

* Students sample differ for each one of the items. Proportions calculated considering the total number of students admitted (2011/2012: 20; 2012/2013:18).

Table 37: The student says he is familiar with the SHS/UM medical curriculum

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	7	35%	13	65%	20	95%
2012/2013	4	24%	13	76%	17	89%
2013/2014	1	6%	16	94%	17	100%
Total	12	22%	42	78%	54	95%

Table 38: Next academic year: the student intends to stay in the medical degree

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	0	0%	20	100%	20	95%
2012/2013	0	0%	17	100%	17	89%
2013/2014	0	0%	17	100%	17	100%
Total	0	0%	54	100%	54	95%

Table 39: Next academic year: the student intends to stay in the same university

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	0	0%	19	100%	19	90%
2012/2013	0	0%	17	100%	17	89%
2013/2014	0	0%	17	100%	17	100%
Total	0	0%	53	100%	53	93%

Table 40: Students' admission: moving away from the family home (Coming to the SHS/UM meant I had to leave the family home)

Academic Year of Admission	No		Yes		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	13	65%	7	35%	20	95%
2012/2013	10	56%	8	44%	18	95%
2013/2014	8	47%	9	53%	17	100%
Total	31	56%	24	44%	55	96%

Table 41: Difficulties/problems anticipated by students

	Academic Year of Admission							
	2011/2012		2012/2013		2013/2014		Total	
	N	%*	N	%*	N	%*	N	%*
Difficulties/problems: economic	8	38%	5	26%	6	35%	19	33%
Difficulties/problems: learning / performance	4	19%	7	37%	7	41%	18	32%
Difficulties/problems: time management	15	71%	15	79%	15	88%	45	79%
Difficulties/problems: money management	4	19%	4	21%	3	18%	11	19%
Difficulties/problems: relationship with colleagues	0	0%	1	5%	0	0%	1	2%
Difficulties/problems: relationship with teachers	0	0%	0	0%	0	0%	0	0%
Difficulties/problems: relationship with family/boyfriend/girlfriend	6	29%	4	21%	4	24%	14	25%
Difficulties/problems: of health (headaches, tiredness, nourishment...)	2	10%	3	16%	4	24%	9	16%
Difficulties/problems: psychological (isolation, anxiety, depression...)	2	10%	2	11%	3	18%	7	12%
Difficulties/problems: daily routine organization (nourishment, hygiene...)	3	14%	3	16%	2	12%	8	14%
Difficulties/problems: other	1	5%	2	11%	0	0%	3	5%

* Students sample differ for each one of the items. Proportions calculated considering the total number of registered students

Table 42: Students' Gender

Academic Year of Admission	Female		Male		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	13	62%	8	38%	21	100%
2012/2013	11	58%	8	42%	19	100%
2013/2014	8	47%	9	53%	17	100%
Total	32	56%	25	44%	57	100%

Table 43: Students' nationality

	Academic year of Admission							
	2011/2012		2012/2013		2013/2014		Total	
	N	%	N	%	N	%	N	%
Canadian	0	0%	0	0%	0	0%	0	0%
French	0	0%	0	0%	0	0%	0	0%
Brazilian	0	0%	0	0%	0	0%	0	0%
American	0	0%	0	0%	0	0%	0	0%
Russian	0	0%	0	0%	0	0%	0	0%
Cape Verdean	0	0%	0	0%	0	0%	0	0%
Timorese	0	0%	0	0%	0	0%	0	0%
Santoméan	0	0%	0	0%	0	0%	0	0%
Venezuelan	1	5%	0	0%	0	0%	1	3%
Cuban	0	0%	0	0%	0	0%	0	0%
All other Nationalities	1	5%	0	0%	0	0%	1	3%
Portuguese	20	95%	18	100%	17	100%	55	100%
Sample (representativeness)	21	100%	18	95%	17	100%	56	98%

Table 44: Students' age

Academic year of Admission	N	%	M	DP	Mín	Máx
2011/2012	21	38%	28,70	4,61	23	37
2012/2013	18	33%	27,82	4,20	22	35
2013/2014	16	29%	27,82	3,14	24	33
Sample (representativeness)	55	96%	28,15	4,04	22	37

Table 45: District of origin

Academic year of Admission	Braga		Porto		Outro		Sample (representativeness)	
	N	%	N	%	N	%	N	%
2011/2012	9	43%	4	19%	8	38%	21	100%
2012/2013	6	33%	7	39%	5	28%	18	95%
2013/2014	11	65%	4	24%	2	12%	17	100%
Total	26	46%	17	30%	13	23%	56	98%

Table 46: Type of secondary school where the student completed the 12th year: all contingents

Academic year of Admission	Public		Private		Sample (representativeness)	
	N	%	N	%	N	%
2011/2012	19	95%	1	5%	20	95%
2012/2013	15	83%	3	17%	18	95%
2013/2014	15	88%	2	12%	17	100%
Total	49	89%	6	11%	55	96%

Table 47: Students' educational background on admission

	Academic year of Admission							
	2011/2012		2011/2012		2013/2014		Total	
	N	%	N	%	N	%	N	%
higher education – "licenciatura"	14	65%	14	78%	10	56%	38	65%
Postgraduate - Master	3	15%	4	22%	7	41%	13	28%
Postgraduate - PhD	4	20%	0	0%	0	3%	5	7%
Sample (representativeness)	21	100%	18	95%	17	100%	56	98%

Table 48: Previous Track

	Academic year of Admission					
	2011/2012		2012/2013		2013/2014	
	N	%	N	%	N	%
Clinical analysis	1	5%	0	0%	2	13%
Pathology Anatomy	0	0%	2	11%	0	0%
Pathology, cytology and tanatological Anatomy	1	5%	0	0%	0	0%
Physical Education	0	0%	0	0%	1	6%
Biology	1	5%	0	0%	2	13%
Biomedical Engineering	0	0%	0	0%	1	6%
Microbial Biology and genetics	1	5%	0	0%	0	0%
Biochemistry	1	5%	1	6%	1	6%
Cardio Pulmonology	1	5%	0	0%	1	6%
Nursing	5	25%	2	11%	1	6%
Biological Engineering	2	10%	0	0%	0	0%
Pharmaceutical Sciences / Pharmacy	1	5%	5	28%	2	13%
Mathematics	0	0%	0	0%	1	6%
Nutrition Sciences	0	0%	1	6%	1	6%
Physics and chemistry	1	5%	1	6%	0	0%
Physiotherapy	0	0%	2	11%	2	13%
Psychology	0	0%	1	6%	0	0%
Dental Medicine	1	5%	0	0%	0	0%
Integrated Master in Industrial Electronics Engineering	1	5%	1	6%	0	0%
Civil Engineering	0	0%	1	6%	0	0%
Chemistry	1	5%	0	0%	0	0%
Radiology	2	10%	0	0%	0	0%
Veterinary Medicine	0	0%	1	6%	1	6%
Sample (representativeness)	20	100%	18	95%	16	94%

Table 49: Students' employment status on admission

Academic year of Admission	without occupation		part-time worker		full-time worker		Sample (representativeness)	
	N	%	N	%	N	%	N	%
2011/2012	6	38%	4	24%	6	38%	16	76%
2012/2013	8	50%	6	38%	2	12%	16	84%
2013/2014	8	57%	4	29%	2	14%	14	82%
Total	29	54%	16	30%	9	16%	54	81%

C.3. REGISTERED STUDENTS: all registered students: Aveiro Transfers

Table 50: Students' Gender

Academic Year of Admission	Female		Male		Sample (representativeness)	
	N	%	N	%	N	%
2013/2014	9	90%	1	10%	10	100%

Table 51: Students' age

	N	%	M	DP	Mín	Máx
2013/2014	10	100%	32,70	6,02	26,93	45,54
Sample (representativeness)	10	100%	32,70	6,02	26,93	45,54

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dissection for a better grasp of human anatomy is undisputable. However, a combination of these two aspects in teaching and learning human anatomy seems to be unexplored. The Medical Council of India does not mandate the use of AV in the dissection hall (DH) and no study was available in current literature on the effectiveness of AV aids in the DH. Therefore, the current study was undertaken.

What was tried? Audiovisual aids were introduced in our department to assist students in cadaveric dissection via live streaming and projection. It comprised of two high-definition Sony® video cameras, wireless microphones with audio-amplifiers and speakers. The video switcher was connected to ten 34-inch LCD panels mounted adjacent to dissection tables. Each dissection session of 2 hours was divided into a pre-dissection workshop of 15 minutes (for stepwise demonstration of dissection in a pre-dissected cadaver), a dissection session of 1.5 hours and a debriefing session of 15 minutes (for discussing the region dissected in nutshell). The effectiveness of AV aids was assessed by two methods in 127 medical undergraduates; first by questionnaire and second by comparing their performance in term-end examinations with that of a previous group, who were taught without using AV aids. Written consent was obtained from students.

What lessons were learned? Responding to the questionnaire, 125 (98%) students said that the AV system in the DH facilitated the overall understanding of human anatomy, 119 (93.7%) felt that both the pre-dissection workshops and the post-dissection debriefing are useful and 99 (78%) wanted it to be used in every DH session. Common drawbacks were difficulty in orientation to cadavers (63/49.60%) and difficulty in comprehension (20/15.74%). Although 126 (99.2%) students said image and sound qualities were good, 66 (55.9%) felt that camera and microphone handling by instructors requires more expertise. Feedback from students was used to improve the use of the system.

Students performed better in both theory (mean scores: 46.82 ± 9.41% and 51.03 ± 8.79%) and practical examinations (mean scores: 49.14 ± 8.82% and 51.91 ± 8.35%) when AV aids were used. Student's *t*-test revealed that the difference in performance was statistically significant at $p < 0.05$. Hence, DH teaching of human anatomy can be rendered more effective by use of AV aids; especially in the current scenario of teacher to student ratios in India[1] and for the time that is available to medical undergraduates for mastering human anatomy.

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Drawings as snapshots of student cellular anatomy understanding

Nuno S Osório, Fernando Rodrigues, Eduardo A Garcia & Manuel J Costa

What problem was addressed? In cellular biology courses, students are generally trained to describe and to interpret textbook model cell representations, but not to draw their understanding of how cells look under the microscope. Schemes of cells are useful to help students organise knowledge but, like all representations, can also hinder student understanding.[1] Asking students to create their visual representations of microscopic observations can also reveal their understanding of issues related to the size of microscopic and sub-microscopic particles. We hypothesised that students would hold misconceptions about the structure and organisation of cells. As one step towards focusing classes on what students should learn, our aim was to reveal those misconceptions.

What was tried? We prepared a surprise drawing assignment to begin the first practical class of observation of human cells under the microscope presented to three classes of undergraduate medical students (total number 120). An A4 handout distributed on site asked students to make two drawings: (i) the scheme of an animal eukaryotic cell and (ii) their vision of an epithelial human scrub slide under the microscope. Students then collected, prepared and stained with methylene blue a scrub of their own buccal cells and observed the preparations under the microscope. The drawings were first analysed by a group of four cellular anatomy experts and four categories were created: (i) the number and organisation of the cells; (ii) the presence of entities that have sizes below the optical microscope

detection limit; (iii) the position of the nucleus within the cell and (iv) odd representations. Two co-authors (NSO, EAG) scored each drawing individually according to these categories and reached consensus. Statistical characterisation of the data was performed in SPSS (SPSS, Inc., Chicago, IL, USA).

What lessons were learned? Every student had at least one of the following misconceptions: (i) sketching a tissue-like structure similar to slides with histological sections (20.8%); (ii) issues with scale revealed by drawings of entities too small to be observed in optical microscopy, namely the cell membrane (66.7%), or organelles and cellular structures such as mitochondria and ribosomes (19.2%); (iii) positioning the nucleus bordering the cell membrane (26.1%), as in most textbooks schemes, instead of being approximately in the centre of the cell; (iv) making odd representations, such as cilia and flagellum (8.3%), pointy shape (8.3%) or blood cells (2.5%), enzymes (1.7%) or extreme dimension disparities (1.7%). Asking students to draw as a means of capturing their understanding revealed unexpected and generalised misconceptions the students held about cell structure. We will take those into consideration in future course editions.

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Curriculum for community-based nurses on care of older adults

Michel Maboh, Aminkeng Leke & Pauline Nyenti

What problem was addressed? As in other developing countries, the health and living conditions of older adults in Cameroon are in steady decline: the loss of children to diseases (e.g. HIV/AIDS), the rural exodus, declining income and dependence, the burden of providing for grandchildren orphaned by disease or simply abandoned to them and an increased incidence of chronic conditions are some of the contributing factors. Older adults have traditionally been cared for within family units. Education of geriatric nurses has not been pursued in Cameroon because of perceived costs, perceived requirement for gerontological health care staff training sites, as well as cultural resistance to concepts like nursing homes.

What was tried? A 1-year curriculum to train nurses in geriatrics was designed with the centrepiece being the care of older adults within their own homes and communities. Those whose condition required further medical assistance were referred to nearby hospitals. During home visits, nurses assessed patients using a variety of assessment tools, planned and implemented care as necessary, provided assistance with activities of daily living, educated family caregivers where available and educated and assisted older adults in health promotional activities. In addition, they advised them on carrying out artisan and economic activities that both raised their self-esteem and financial independence. The nurses worked with community groups providing advice and direction on how to start and obtain funding for common initiatives like food and animal production and how to run cooperative-style income generating activities, organising events that promoted socialisation, exercise and maximised existing functionality. Although emphasising geriatric nursing competencies, the curriculum also provides nurses with knowledge and skills on starting community-based consultancy services.

What lessons were learned? After 2 years, interviews with older adults, groups and communities that received and worked with the nurses indicated satisfaction and gratitude for this initiative, which they said had given them 'reason to live again'. Other outcomes included discovery of previously undiagnosed conditions and issues such as abuse, polypharmacy and inadequate nutrition. The training also helped nursing students develop and teach entrepreneurial skills. Challenges included changing perceptions of older adults with respect to accepting 'strangers' in their homes to provide care and expectations of free medications and health services. The sustained nature of this model indicates that geriatric nursing practice and training is culturally and economically feasible in Cameroon.

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Associations between Medical Student Empathy and Personality: A Multi-Institutional Study

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Abstract

Background: More empathetic physicians are more likely to achieve higher patient satisfaction, adherence to treatments, and health outcomes. In the context of medical education, it is thus important to understand how personality might condition the empathetic development of medical students. Single institutional evidence shows associations between students' personality and empathy. This multi-institutional study aimed to assess such associations across institutions, looking for personality differences between students with high empathy and low empathy levels.

Methods: Participants were 472 students from three medical schools in Portugal. They completed validated adaptations to Portuguese of self-report measures of the NEO-Five Factor Inventory(NEO-FFI) and the Jefferson Scale of Physician Empathy(JSPE-spv). Students were categorized into two groups: "Bottom" (low empathy, N = 165) and "Top" (high empathy, N = 169) according to their empathy JSPE-spv total score terciles. Correlation analysis, binary logistic regression analysis and ROC curve analysis were conducted.

Results: A regression model with gender, age and university had a predictive power (pseudo R2) for belonging to the top or bottom group of 6.4%. The addition of personality dimensions improved the predictive power to 16.8%. Openness to experience and Agreeableness were important to predict top or bottom empathy scores when gender, age and university were considered." Based on the considered predictors the model correctly classified 69.3% of all students.

Conclusions: The present multi-institutional cross-sectional study in Portugal revealed across-school associations between the Big5 dimensions Agreeableness and Openness to experience and the empathy of medical students and that personality made a significant contribution to identify the more empathic students. Therefore, medical schools may need to pay attention to the personality of medical students to understand how to enhance the empathy of medical students.

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Introduction

Empathy is a desirable trait in physicians and an important element of the physician-patient relationship [1]. Empathetic physicians have a positive impact on patient satisfaction [2], on confidence in the doctor [3], on adherence to therapy [4,5] and on clinical outcomes [6,7]. Empathy is related to understanding patients feelings and, not surprisingly, patients who feel understood are more likely to fully explain their symptoms and to engage in the patient-physician relationship [8]. The multiple definitions of empathy in the medical education literature [9] characterize empathy as a mix of cognitive - understanding patient emotions and communicating the understanding back to the patients - and affective dimensions - emotional responses to patient feelings [10,11]. The cognitive dimension is amenable to training and therefore an important mission of medical schools is that of caring for and enhancing the empathy of medical students [12–15].

The empathy of medical students has been consistently associated with gender and personality [16–20]. The Five-Factor Model (FFM or Big5), probably the most accepted personality model worldwide [21,22], is increasingly being applied in medical education [12,23,24]. The FFM postulates five personality dimensions that, altogether, reflect individual differences in social, emotional and behavioral patterns [25,26]: Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness [25]. Conscientiousness includes characteristics such as self-discipline, persistence and striving for achievement. Extraversion consists of attributes like sociability, positive affect and energetic behavior and Agreeableness refers to altruistic affective and collaborative behavior. Neuroticism comprises characteristics like anxiety, fearfulness, and insecurity in relationships. Openness to Experience includes dimensions such as active imagination, preference for variety and intellectual curiosity [27]. A recent multi-institutional study in Australia has shown that student personality profile vary between medical schools [24].

Medical student personality and empathy are associated. The literature reports positive correlations of empathy and sociability [16], Openness to Experience and Agreeableness [18] and negative correlations with Aggression-Hostility [16]. In respect of

Table 1. Study population by gender, university and empathy scores.

	Top tercile (N = 169)	Bottom tercile (N = 165)	Total (N = 334)
	Frequency (%)	Frequency (%)	Frequency (%)
Gender			
Females	120 (71)	94 (57)	214 (64)
Males	49 (29)	71 (43)	120 (36)
Age	21.6 (5.2)	20.7 (4.9)	21.2 (5.1)
University			
UBI	45 (27)	70 (42)	115 (34)
UALG	34 (20)	17 (10)	51 (15)
UM	90 (53)	78 (47)	168 (50)
JSPE-spv	121.9 (5.6)	97.7 (8.6)	110.0 (14.1)

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the Big 5 Model, empathy correlates mostly with Agreeableness [18] probably reflecting this dimension's contribution to interpersonal behavior [28]. Available evidence suggests that high conscientiousness scores in young populations inhibit aggressive behaviors [29], so positive associations should be expected between medical student conscientiousness and empathy.

Most studies that have focused on the connections between student personality and empathy have been restricted to a single institution. Generalization of findings thus requires further multi-institutional design studies. There were two major goals for the present study: (1) the first one was to assess whether associations between medical student's personality dimensions and empathy scores generalize across institutions; (2) the second one was to differentiate students with high empathy scores from the less empathic students.

Thus, we looked for student's empathy scores and personality dimensions from three different schools in Portugal, with different organizations, curricula and admissions processes: i. one school in the south of the country that offers a graduate entry Problem Based Learning (PBL) program that selects students based on a psychological test and Multiple Mini Interviews (MMIs); ii. one school in the center/interior of the country with a horizontally integrated program mostly delivered through tutorials, in groups of 25–30 students that admit most students directly from secondary education, through a national competitive system; iii. one school in the north of the country that offers a systems-based horizontally integrated programs mostly delivered through tutorials with two parallel tracks, a 6 year program for high school entrants and a 4 year program for graduate entry students (annual intake of 18), using a science tests and MMIs.

Methods

Ethics

Research in medical education is exempted from the university's Ethical Committee on the ground that this type of research does not have the purpose to answer a research question on health or biomedicine. Nevertheless, this research followed ethical guidelines. Written consent was collected from the participants, prior to the study in accordance with the ethical Declaration of Helsinki. Subjects were specifically informed responses would be kept anonymous, and results would be reported only in aggregate. As all the subjects in the study were adults, there was no need to obtain permission from parents or caretakers. The data collection and the database organization were reviewed and authorized by the Portuguese Commission for Data Protection (CNDP:10432/2011). The study obtained retrospective formal approval from our Ethics review board prior to publication - Subcomissão de ética para as ciências da vida, process SECVS - 071/2013.

Participants

The study sample comprised 472 first year medical students, from three of the eight medical schools in Portugal, namely from the University of Beira Interior (UBI), 154 (32.6%; response rate = 81.2%), the University of the Algarve (UAlg; response rate = 87.1%), 71 (15%) and the University of Minho (UM), 247 (52.3%; response rate = 87,3%). 370 of the participants (78.4%) were admitted directly from secondary education into 6-year medical degree programs (UBI and UM), whereas 102 (21.6%) were admitted to graduate entry programs (UAlg and UM).

Three entering classes are represented in the study sample, where 312 (66.10%) of students were females. Mean age of 21 years old. A sub- sample of 334 students was selected to compare the students with the highest (Top tercile, $M = 121.9$; $SD = 8.6$) and the lowest (Bottom tercile, $M = 97.8$; $SD = 5.6$) empathy scores (Table 1). These two groups differ significantly in the JSPE-spv scores [$t_{(280.3)} = 30.4$, $p < .001$].

Instruments

The five personality dimensions, Neuroticism, Extraversion, Agreeableness, Openness to Experience and Conscientiousness, were measured with the Portuguese version of NEO-FFI inventory [30]. It uses a 5-point *Likert* scale ranging from 0 (strongly disagree) to 4 (strongly agree) and can be completed in approximately 15 minutes. The Portuguese version of the NEO-FFI includes 60 items similar to the original North American instrument and corroborates the well- established cross-cultural reliability, factorial structure and the communalities of personality according to gender, age and educational differences [30].

Empathy was measured with the self-administered Jefferson Scale of Physician Empathy (JSPE) – students Portuguese version (JSPE-spv) that includes 20 items answered on a *Likert* type scale: from 1 (Strongly disagree) to 7 (strongly agree), and aggregated in 3 factors: "Perspective Taking" (10 items), "Compassionate Care" (8 items) and "Standing in the Patient's Shoes" (2 items). The JSPE-spv has valid psychometric properties [31].

Procedures and Data Analysis

In each institution, students were invited to take part in the research by one of the researchers in person. In two institutions students answered at the end of scheduled class time, with the authorization of faculty. In the other institution, students filled the instruments at the end of a welcoming session by the Medical Education Unit. There was no set time limit to answer the forms in any of the institutions. Participation was voluntary and individual and students were ensured they would not be penalized for not participating The researchers guaranteed data would be kept confidential. Written informed consent was obtained from all participants. Students answered the instruments on paper in two schools and online in a computer lab in the other school. Answers were collected during the initial weeks at medical school, so it is highly unlikely that their personality and empathy scores have been influenced by medical school. Data were analyzed with software *STATA 12*.

Empathy was analyzed as a scale variable (continuous variable) for the correlation analysis between the big five personality dimensions and empathy scores and as a categorical variable for the logit regression analysis. Students were categorized into two groups: "Bottom" (low empathy, N = 165) and "Top" (high empathy, N = 169) according to their empathy JSPE-spv total score (the top and the bottom terciles in terms of JSPE-spv scores). The categorization into these two groups was made considering that the second goal of this study was to differentiate medical students on their empathy JSPE-spv scores. Therefore, the students at the extremes could be more easily differentiated on their personality dimensions than those with intermediate self-reported empathy. In order to explore the predictive power of personality to student's empathy we conducted a logit regression analysis on two panels of variables: in panel A we included gender, age and university as predictors of students' empathy and in the panel B the big five personality dimensions were added to the previous predictor variables. The outcome variable assumed the value 1 if the student belonged to the Top empathy group and the value 0 otherwise. Besides regression coefficients, odds ratio and measures of model fit (Nagelkerke pseudo-R^2, AIC, BIC) we also calculated measures of classification (hit rate, specificity, sensibility, improvement over chance index, ROC curves and optimal cut-off value). A comparison between Panel A and Panel B models was conducted using the logit regression models and the ROC curves.

The distribution was not normal, as a significant Kolmogorov-Smirnov test was found for all continuous variables. Nevertheless, skewness and kurtosis analysis showed no severe departures from normal distribution. Except for age, all skewness and kurtosis absolute values were below 2.

Results

Descriptive and Correlation Analysis

For a total of 334 students, we found significant and positive correlations between total JSPE-spv score and Extraversion ($r = .183$, $p < .001$), Openness to Experience ($r = .216$, $p < .001$), Agreeableness ($r = .310$, $p < .001$) and Conscientiousness ($r = .188$, $p < .001$). The magnitudes of correlations between personality dimensions and scores of self-reported empathy were low, ranging from −.002 to .310 for Neuroticism and Agreeableness respectively (Table 2).

Binary Logistic Regression

Table 3 presents the predicted coefficients (B), the coefficients standard errors (S.E), the Wald statistics (χ^2 Wald), the significance level (p), the odds ratios [Exp (B)], and the 95% confidence intervals (CI) for each predictor of the logit regression model.

The predictive power of the two panels revealed an improvement from the Nagelkerke pseudo R^2 of 6.4% in the Panel A to 16.8% in the Panel B. Through the differences in the chi-square statistic and in the degrees of freedom of the two panels, we found the predictive power improvement as statistically significant ($p < .001$), according to the chi-square table: $\Delta\ \chi^2 = 59.59 - 22.25 = 37.34$; Δ df $= 9 - 4 = 5$. The Nagelkerke pseudo R^2 of 16.8% in the Panel B indicated a model that accounted for 16.8% of the total variance, suggesting the set of predictors discriminated between students in the bottom and top empathy scores subsamples.

Regarding to associations between personality and empathy, Wald test showed that personality dimensions Openness to Experience (OR = 1.076, χ^2Wald (1) = 8.98, p = .003) and Agreeableness (OR = 1.094, χ^2Wald (1) = 9.79, p = .002) were statistically significant predictors of empathy JSPE-spv scores after controlling for university, gender and age. For each five point increase in the Openness to Experience score, there was a 1.44 times greater chance of being in the top empathy score tercile when university, age and gender were controlled. Similar results for Agreeableness were obtained: for each five points increase there is a 1.56 times greater likelihood of having high empathy scores, controlling the other variables in the model.

UBI variable showed a negative impact on the probability of student being classified as top empathy score (OR = 0.507, χ^2Wald (1) = 6.118, p = .013): being a UBI student, versus UM student, decreased by 49.3% the odds of having high empathy scores. Furthermore, the odds of having high empathy scores were four times higher in UAlg students when compared to the UBI students (OR = 1.415; χ^2Wald (1) = 7.82, p = .005).

The logistic regression model classification power revealed an overall hit rate of 68.7% (a 19% increase compared to the proportional percentage of correct classification by chance: $[(161/329)^2 + (168/329)^2] \times 100 = 50\%$), which represented an improvement over chance index of 37.4% ($[(68.7\% - 50\%)/(1 - 50\%)] * 100$). According to this result, the model provided a 37.4% reduction in overall classification error over chance, which means 37.4% less classification errors than those made if classification was done by chance. Correct prediction rates of 70.2% for the most empathic students (Sensitivity) and 67.1% for the least empathic students (Specificity) were found. This improvement was significant at $p < .001$, according to a one proportion test.

Concerning to the ROC, Panel B model presented an area under the curve (AUC) of .74, which was significantly higher than 0.5 ($p < .001$) and significantly different ($p < .001$) from the .64 AUC of Panel A model (Figure 1). This suggested that the two models were significantly different in their predictive ability and that Panel B presented a reasonable predictive ability to classify students in the Bottom or Top empathy score group.

If the optimal cut-off value of .508 was considered (Figure 2), then the model would accurately classify 69.6% of students in Top (Sensitivity) and 68.9% of students in Bottom group (Specificity). The hit rate would increase to 69.3%, which according to a binomial proportion test was significantly higher than 50% ($p < .001$).

Discussion

The present multi-institutional and cross-sectional study in Portugal suggested that medical students who were more agreeable and open to experience were also likely more empathetic. This conclusion reinforces the argument that, personality and empathy

Table 2. Descriptive and Correlation Analysis.

	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
Total Score in the JSPE-spv scale	−.002	.183***	.216***	.310***	.188***
Neuroticism		−.372***	−.194***	−.247***	−.286***
Extraversion			.215***	.400***	.261***
Openness				.144**	−.310***
Agreeableness					.379***
Total Mean (SD)	21.1 (7.7)	31.7 (5.9)	29.7 (5.5)	34.7 (5.3)	35.1 (6.3)
Bottom Group - Mean (SD)[a)]	21.5 (7.5)	30.7 (6.1)	28.3 (4.5)	33.2 (5.4)	33.7 (6.5)
Top Group - Mean (SD)[a)]	20.7 (7.8)	32.7 (5.9)	31.1 (6.1)	36.1 (4.7)	36.5 (5.9)
UBI-Mean (SD)[b)]	20.8 (7.3)	31.9 (6.3)	28.7 (5.9)	34.9 (5.8)	34.5 (6.3)
UALG-Mean (SD)[b)]	18.7 (6.4)	32.2 (6.0)	31.7 (4.9)	36.3 (4.3)	35.4 (6.9)
UM-Mean (SD)[b)]	22.0 (8.1)	31.5 (5.6)	29.7 (5.3)	34.0 (5.1)	35.4 (6.2)

Note: N = 334;
** p<.01;
*** p<.001;
[a)]Mean and standard deviation of each one of the personality dimensions by empathy score top (N = 169) and bottom group (N = 165);
[b)]Mean and standard deviation of each one of the personality dimensions by university, UBI: N = 115; UAlg: N = 51 and UM: N = 168.
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of medical students are related [16,18,32–34] and confirms the specific findings for Portugal of a former study conducted in one of the institutions [18]. Participants were both high school entry and graduate entry students, from a range of 3 geographically distant schools with different program structures. There are no published multi-institutional studies that contemplate such diversity of participants.

Table 3. Logit Regression results for predicting medical students' self-reported empathy.

Logit Regression	B	S.E.	χ^2_{wald} (1)	p[a)]	Exp(B)	CI 95% Exp(B)
Panel A						
UBI	−.625	.254	6.063	.014	.535	[.325;.880]
UAlg	.660	.444	2.210	.137	1.935	[.811; 4.619]
Gender	−.781	.241	10.493	.001	.458	[.285; .735]
Age	−.003	.031	.011	.917	.997	[.939; 1.059]
Pseudo-$R^2_{(Nagelkerke)}$	.064					
$\chi^2_{(4)}$	22.25***					
AIC	445.69					
BIC	468.47					
Panel B						
UBI	−.680	.275	6.118	.013	.507	[.296;.868]
UAlg	.736	.476	2.391	.122	2.087	[.821;5.301]
Gender	−.494	.287	2.959	.085	.610	[.348;1.071]
Age	−.041	.033	1.549	.213	.959	[.899;1.024]
Neuroticism	.015	.020	.549	.459	1.015	[.976;1.055]
Extraversion	.028	.024	1.317	.251	1.028	[.980;1.078]
Openess	.073	.024	8.984	.003	1.076	[1.026;1.129]
Agreablenes	.089	.029	9.794	.002	1.094	[1.034;1.157]
Conscientiousness	.026	.023	1.258	.262	1.026	[.981;1.074]
Pseudo-$R^2_{(Nagelkerke)}$	.168					
$\chi^2_{(9)}$	59.59***					
AIC	417.66					
BIC	459.42					

[a)]p = p-value; N = 329;
*** p<.001.
doi:10.1371/journal.pone.0089254.t003

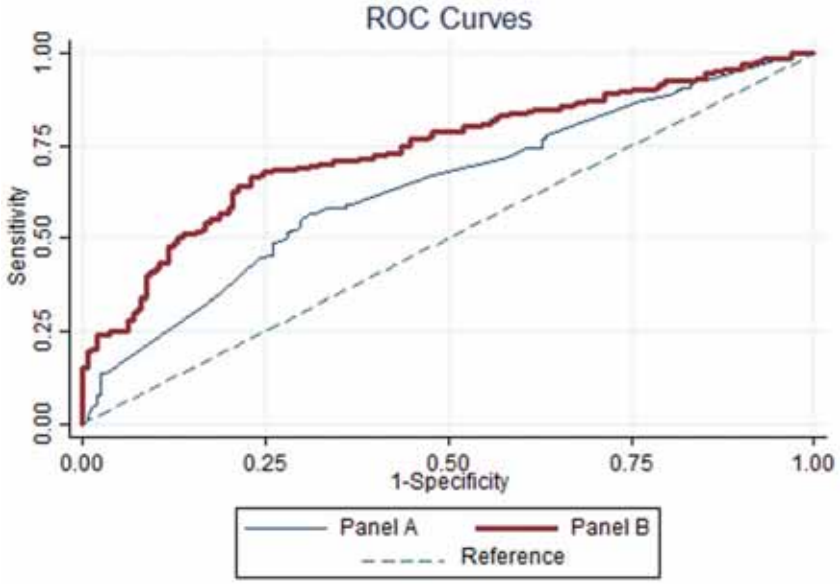

Figure 1. ROC curves predictive logit model for empathy (Panel A and Panel B).
doi:10.1371/journal.pone.0089254.g001

Our findings showed that personality made a significant contribution to identify the more empathic students since inclusion of the Big5 Personality dimensions in our model resulted in gains in the predictive power of approximately 10%. The key contributing personality dimensions were Agreeableness and Openness to Experience, which are considered to be favorable for medical students, particularly in the clinical environment [35–38] as facilitators for establishing good rapport in the doctor/

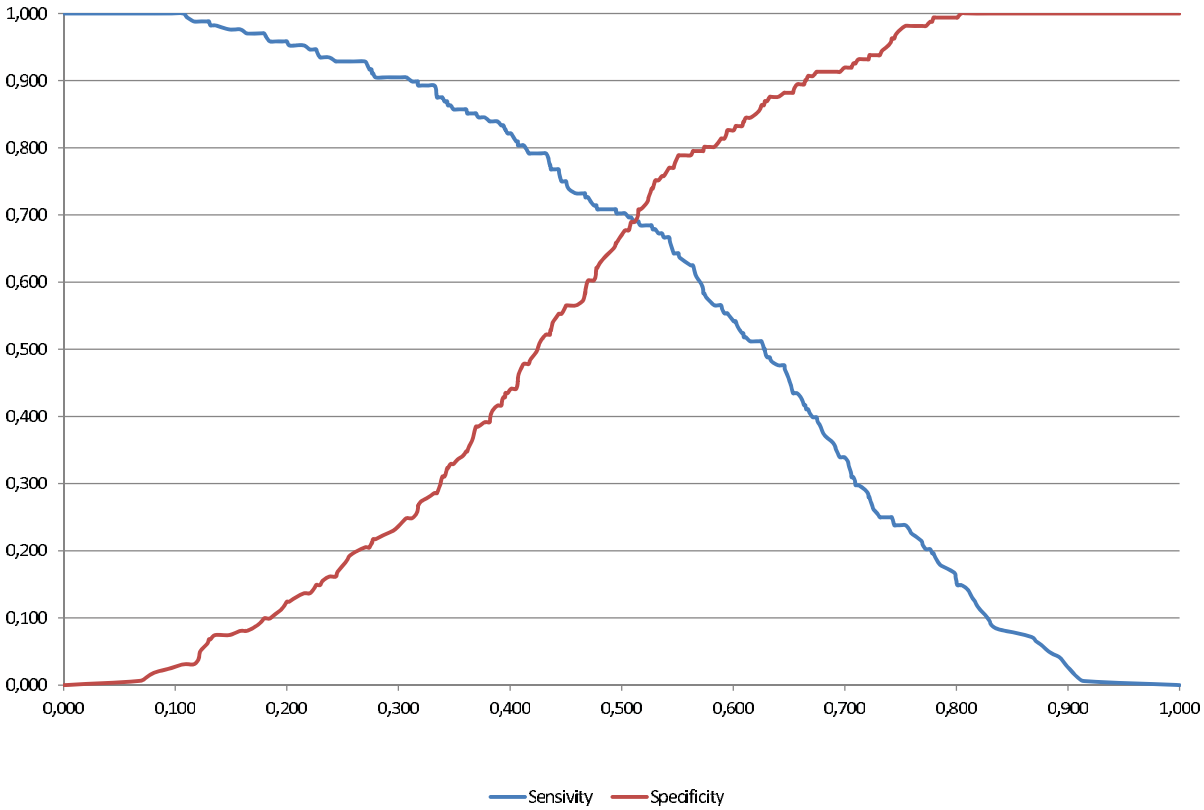

Figure 2. Optimal cut-off value using the sensitivity and specificity of the Panel B logit model.
doi:10.1371/journal.pone.0089254.g002

patient relationship and in dealing with the unexpected. The absence of a significant association between empathy and conscientiousness, contrary to what we expected, suggests that the two constructs are independent, even though conscientiousness may be the key to performance in the working environment [39–42].

The contribution of gender differences to assign individuals to the lowest/highest tercile groups of empathy scores was poor and not statistically significant. However, tests of associations between gender and age with empathy revealed significant gender differences - females outscored males – as reported in the majority of empathy studies [43] and age made no significant differentiation. This lead us to conclude that further important variables beyond gender, age and university are needed to explain the empathy levels of medical students.

Additionally, inter-institutional comparisons revealed that the JSPE-spv scores of medical students differed between medical schools, with the highest and lowest scores (significantly different) corresponding to, respectively, UAlg and UBI. UM and UBI scores also differed significantly but UM and UALg were not. It was interesting to notice that 32.1% of the UM and UAlg participants were graduate entry students, who had gone through admissions process in the corresponding institutions with common elements: the Multiple Mini Interview (MMI). The UBI does not apply the MMI. Taken together, since the pool of graduate entry candidates is potentially the same for all schools as the process is open to all Portuguese citizens, these findings suggest that there was a positive contribute of MMIs to attract or to select students with enhanced empathy. Indeed it has been reported that students with high levels of Conscientiousness and Agreeableness are being attracted to schools that use interviews in their selection process [24]. That evidence combined with our findings that the most agreeable and conscientious students are also the most empathic, justify our result that schools that use MMIs have the most empathic students. An implication of this study is that feasible selection methods based on interviews may discriminate positively students who will be more empathetic.

Our study is necessarily sensible to limitations, the major being the use of self-reported measures like empathy and personality, which are necessarily different from measurements from observations of the student when communicating with patients. Another limitation is related to the low predictive power of the regression analysis presented. More than 80% of empathy scores' total variance remained unexplained, which means there is a set of empathy predictors that was not yet discovered. Nevertheless, the model classified students into the Top and Buttom empathy score groups with 37.4% less classification errors than those made if classification was done by chance.

We are also aware that our sample is not representative of the Portuguese population and medical students across a long time span. However, we provide unique multi-institutional data from one country with a Latin culture that we feel as important to advance our understanding on the associations between empathy and personality of medical students.

Naturally gender and age are variables that are outside the range of the educational interventions, but there may be aspects for personality that are amenable to change. Interesting, other variables need to be explored to predict the empathy of medical students with greater accurateness. Those are probably the ones which are teachable [13] and may make students respond to interventions such as video clip discussions [12] [44], writing interventions [45], communication skills training [44] or engaging students in the creative arts [44].

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Author Contributions

Conceived and designed the experiments: MJC PM IN MP. Performed the experiments: MJC PC RA PM IN. Analyzed the data: MJC PC RA PM IN MP. Wrote the paper: MJC PC RA PM IN MP.

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The evaluation of student-centredness of teaching and learning: a new mixed-methods approach

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Abstract

Objectives: The aim of the study was to develop and consider the usefulness of a new mixed-methods approach to evaluate the student-centredness of teaching and learning on undergraduate medical courses. An essential paradigm for the evaluation was the coherence between how teachers conceptualise their practice (espoused theories) and their actual practice (theories-in-use).

Methods: The context was a module within an integrated basic sciences course in an undergraduate medical degree programme. The programme had an explicit intention of providing a student-centred curriculum. A content analysis framework based on Weimer's dimensions of student-centred teaching was used to analyze data collected from individual interviews with seven teachers to identify espoused theories and 34h of classroom observations and one student focus group to identify theories-in-use. The interviewees were identified by purposeful sampling. The findings from the three methods were triangulated to evaluate the student-centredness of teaching and learning on the course.

Results: Different, but complementary, perspectives of the student-centredness of teaching and learning were identified by each method. The triangulation of the findings revealed coherence between the teachers' espoused theories and theories-in-use.

Conclusions: A mixed-methods approach that combined classroom observations with interviews from a purposeful sample of teachers and students offered a useful evaluation of the extent of student-centredness of teaching and learning of this basic science course. Our case study suggests that this new approach is applicable to other courses in medical education.

Keywords: Student-centred learning, espoused theories, theories-in-use, mixed methods

Introduction

There is increasing emphasis on providing Higher Education that adopts a student-centred approach to teaching and learning. For example, the Bologna Process in Europe states "*student-centred learning (SCL) is an approach to education, which aims at overcoming some of the problems inherent to more traditional forms of education by focusing on the learner and their needs, rather than being centred around the teacher's input.*"[1] The importance of student-centredness for teaching and learning is also highlighted in several national and international recommendations for medical schools.[2-7] For example, the General Medical Council in the United Kingdom recommends that learning should be "*a process in which students are responsible for organising and managing their own learning activities and needs*"[2] The focus of SCL is on what and how the student is learning, with an expected outcome that there will be increased retention of the content and also that life-long learning will be developed by the student.[8] In addition, there is improved student engagement and a shift in the balance of power in class, from teacher to learner.[9]

Evaluating the student-centredness of teaching and learning is challenging since there is not a precise definition for "student-centredness."[10-12] However, Weimer provides a theoretical summary of the construct and offers five dimensions that can be useful for the evaluation of the student-centredness of teaching and learning:[8] (a) the balance of power, with students involved in course decisions, including selection of content and assessment; (b) the function of content, with an emphasis on using content as a

stimulus to learning and for the development of learning skills; (c) the role of the teacher, with a move towards the teacher becoming a learning facilitator that promotes student motivation and engagement, and creates an environment for learning; (d) the responsibility for learning, which should be placed upon students; and (e) the purpose and processes of evaluation, that should adopt the assessment for learning through a combination of both summative and formative assessment. Weimer's dimensions to evaluate the student-centredness of teaching and learning have not previously been used in medical education and only a hybrid-version has been used in other contexts.[11]

To achieve intended student-centred learning outcomes, teachers must conceptualise their teaching under a student-centredness perspective and teach accordingly.[13] The theoretical views and beliefs of teachers about teaching (what they say that they would do in a certain situation), have been named "espoused theories", whereas "theories-in-use" represent what they actually do.[13,14] Evaluating whether the personal beliefs are expressed in actions requires assessing whether the theories-in-use correspond to the espoused theories.[14] For example, teachers may hold firm beliefs that their focus is on facilitation of individual student learning, but teach through traditional lectures delivered to all students. This personal beliefs paradigm to understand the student-centredness of teaching and learning can be useful for staff development.[15]

Studies in medical education which claim that a teaching or learning activity, including a whole course, is student-centred generally rely on information derived from student responses to questionnaires,[16-20] or from a combination of semi-structured interviews and questionnaires.[21] Some studies also infer the extent of student-centredness from differences in academic performance[19,20] or the relationship between the time students spent using a specific software and their final exam grades.[22] However, these methods offer a limited view of the actual teaching and learning processes and there is a need for measures of student-centredness of teaching and learning beyond student evaluations.[23] Studies in pre-university education have demonstrated the usefulness of alternative methods, such as classroom observations.[24,25] Observing teachers in action and interviewing students and teachers are essential for the identification of the beliefs of teachers and how such beliefs are translated into practice. However, with the exception of a study comparing different instructional methods, [26] results from classroom observation methods are seldom reported in undergraduate medical education.

Rationale for the study

We recognised the importance of student-centredness for teaching and learning but we had the challenge of how to evaluate this construct, especially from the paradigm of teacher espoused theories and theories-in-use. The aim of the study was to develop and consider the usefulness of a new mixed-methods approach to evaluate the student-centredness of teaching and learning. We underpinned our evaluation approach with Weimer's dimensions of student-centredness and the paradigm of teachers' espoused theories and theories-in-use[13,14] about facilitation of student-centred learning.[11,27,28] For the context of our research, we chose a case study of a module within an integrated basic sciences course that had been consistently rated highly by students for being active in promoting student-centred learning.[29] The course was part of a larger medical school programme with student-centred teaching and learning policies.[30] For example, regarding classes, the policies define that "*the learning activities should foster student interventions*" through seminars or work in small groups.[30]

Methods

The case (context)

The case was a module on "muscle-skeleton" within the "Functional and Organic Systems I" (FOS I) course, a first year/second semester course of the undergraduate medical programme of the School of Health Sciences, University of Minho, in Portugal. FOS I was horizontally integrated at level nine in the integration ladder[31] through an "organ systems-based" framework [32] to scaffold the learning of four major disciplinary areas: anatomy, physiology, biochemistry and histology.[29] The course was sub-divided in three sequential blocks with similar length named modules.[29] Teaching in a typical module followed a five step pedagogical cycle: i. overview tutorials to clarify learning objectives; ii. supervised or self-directed individual or group learning activities (including laboratory classes, group tutorials, literature readings, training of elementary clinical skills); iii. general disciplinary and multidisciplinary interactive lectures to identify any student difficulties related to understanding the content; iv. reflection and consolidation of learning; v. summative assessments. Patient vignettes were used extensively both in class activities – to trigger motivation and scaffold learning - and in assessment items in the summative assessments.[29] The class observed in this study had a total of 167 students, of which 64.1% were females. The average age of the students was 18.7 years old.

Data collection and analysis

Data was collected from individual interviews of teachers to identify their espoused theories, and classroom observations and a student focus group to identify the teachers' theories in action. A content analysis framework based on Weimer's five dimensions of student-centred teaching[8] was used to analyse the data. ARL conducted the interviews and transcribed the interview audio-records verbatim. ARL and MJC categorized the materials using deductive analysis.[33]ARL and MJC independently read and coded the transcripts, discussing any discrepancies until a final consensus was agreed. Triangulation across the observation and interview data was conducted by ARL and MJC, dis-

cussing any discrepancies until a final consensus was agreed.

Ethical approval was obtained from the University of Minho's Ethics Subcommittee for health and life sciences: process SECVS - 021/2014. All teachers and students in the observed classroom sessions gave informed consent and all interview participants gave signed written consent. All participants were notified that the research would not identify participants by name.

(a) Interviews with teachers

A purposeful sampling method[33,34] was used to identify teaching staff for interviews to ensure that there was a variety of teaching experience and that major disciplinary areas on the course were represented. We interviewed seven of the 36 (19%) course teachers from all the disciplinary areas. We targeted four novice teachers with three to four years of teaching experience and three experienced teachers with six to 11 years of teaching (four had presented papers in international education meetings, of whom one had educational publications in peer reviewed journals on approaches to facilitate student-centred learning).[35] Teachers were interviewed after the conclusion of the course: two within two weeks and the others later, according to their availability.

(b) Classroom observations of teachers

The criteria used to identify classes for observations were coverage across all disciplinary areas, maximum sampling of course teachers, and diversity of classroom activities. Classes conducted by nine teachers, of whom seven were subsequently interviewed, were observed. The total time of observation was 34 hours, and included introductory tutorials (one hour in each disciplinary area), and classes within the steps ii and iii of the pedagogic cycle in the areas of anatomy (nine hours), histology (six hours), biochemistry (six hours), physiology (nine hours).

The observer attended classes as a passive participant and used an open-ended protocol[36] to annotate the strategies used by teachers within a framework derived from Weimer's five dimensions of student-centred teaching. The observations were intended to document how the principles underlying student-centredness were put to use rather than to document the frequency of use of specific methods. All teachers gave verbal consent for the observations.

(c) Focus group of students

Student selection for the focus groups was conditioned by circumstances related to the academic calendar. Taking into considerations that the interview would take place at the end of the academic year and that we wished to maximise student participation, we initially sent an invitation to all students. However, after one reminder, we had only one reply. We then opted to approach students individually by email. We selected students who had taken the course for the first time and who had been active and critical participants in curricular discussions. We balanced for gender (two females) and included students from different secondary schools.

Results

The student-centredness of teaching and learning on the course is presented, with supporting illustrative quotes, using the framework of Weimer's five dimensions.

The balance of power

In interviews, teachers mentioned the importance of engaging students in the learning process.

> *"We try to foster the students' intellect, (…) force them to participate more in the class."* (Teacher 1)

> *"Because I think that [a presentation of a group assignment] worked well, the fact, for instance, I requested questions from students, and when students did not correspond, I then requested questions from the presenting group."* (Teacher 2)

> *"My concern [in classes] is to encourage the maximum participation of the student, i.e. that classes achieve the highest possible participation."* (Teacher 3)

As a means of transferring some control of the learning process to the students, teachers welcomed and valued the class as a place for discussion. There was a common perception of shared ownership of the class.

> *"I like the fact that (...) the issue does not get exhausted in that class, they can ask questions and I even do not know how to answer the questions, but then be able to individually, or even go with them and study the question that was put to me so we can find some response."* (Teacher 6)

> *"The system isn't based on teacher. The system is based on the student."* (Teacher 2)

Classroom observations identified that students were frequently given autonomy in class, and teachers were available to answer questions. For example, in laboratory classes (histology and anatomy) instead of being told where to go and how much time to spend with materials that had been pre-selected by their teachers, the students could choose independently the sequence and the amount of time invested in the materials. Students in the focus group stated that they recognized that the classes were conducted in ways that required them to learn by themselves. For example, students considered oral presentation assignments as an important learning moment:

> *"As we explain things to other people we are forced to learn things much better than if we just had to listen to the content and then answer pre-defined questions."* (Student A)

Students also noted that there was a change in power relationships between teachers and students.

> *"These classes are very much ours."* (Student B)

The least student-centered aspects were the selection of course objectives and the design of the summative assessment program, which were entirely under teacher control, with teachers defining the timing and the amount of assessments.

> *"Mainly the teachers [take part on the design of the assessment program]".* (Teacher 5)

The function of content

Teachers stated in the interviews that they used content to capture student curiosity and enhance student motivation Teachers were also concerned about pitching the level of difficulty of their questions so as not to make the class too difficult for the students.

> *"Make it [the subject] more interesting or make it a greater challenge to students."* (Teacher 1)

> *"We have to think carefully how to make their lives just a little more difficult."* (Teacher 1)

> *"(Ask) simple very general questions and the goal is that students will begin to go to places where they will have the content then start studying … until they gain interest and curiosity on the issues triggered by the questions."* (Teacher 4)

The biochemistry teachers considered that content should influence the development of student skills. The participation of students in class was seen as essential for student development, instead of only a way to assimilate content. The class activities of biochemistry included searching the literature to identify connections between molecules and disease, reading and discussing scientific papers and delivering oral presentations.

> *"Information that they gather at the moment, from their questions (…) and from the fact that they were thinking, it's crucial."* (Teacher 2)

For example, in anatomy classes, as students circulated through materials, such as NMR scans and X-rays, they were constantly questioned about the underlying anatomical content and related clinical correlations. In the interviews, students referred to how teaching was often more directed to the development of skills instead of being centred on the scientific content.

> *"The aim of the activity is to prepare us to read scientific papers that will be our source of knowledge in the future."* (Student B)

> *"We learn to interpret."* (Student A)

The role of the teacher

Teachers referred to themselves as learning facilitators and student guides in their interviews. One teacher explained that teachers should orientate students, but should not permanently shadow the student and prevent the student from learning how to take responsibility for their own learning.

> *"Teacher has responsibility on student learning, and then he should help them."* (Teacher 1)

> *(A teacher is someone who) "Guides [students] … and then it is up to the students to walk the path."* (Teacher 2)

Returning to the example of the histology and anatomy laboratories, observations revealed that there were always teachers in the vicinity to facilitate the students to explore the different materials. Students stated that they were comfortable with the design of classes, and they alternated peer-to-peer discussions with targeted questions to their teachers.

> *"I think that teacher is there with the orientation role (…) they [teachers] are guide you to the content that you will read."* (Student B)

> *"The teacher had an important role as give us the material, guide us through the subjects."* (Student B)

The responsibility for learning

Teachers stated that they gave students high responsibility in classroom activities.

> *"Students should take advantage and pose questions at that moment."* (Teacher 2)

> *"the goal is simply to put the student in contact with the images that will appear in the module or the nomenclature that will arise in the module, i.e. the student will do it by him/herself because we believe that from a cognitive point of view this is much richer if it is done by the student."* (Teacher 5)

Teachers attributed learning achievements to the effort and commitment of the students much more than to their personal commitment in teaching.

> *"Most of students' work and learning didn't result only by the work that was done with the teacher. Clearly, it is largely merit of the student who studies."* (Teacher 2)

The increased responsibility for learning was understood by the students as an opportunity to increase their knowledge.

"The reflections must be generated by us [students] and we are always posing questions." (Student A)

"With our questions we [students] could achieve greater learning (…) in fact our role is paramount for the study." (Student B)

Students agreed that the course demanded "responsibility of learning" and that the teaching approaches made them prepare for class.

"We need to arrive in class prepared. This really forces us to learn." (Student A)

"[Teachers] posed questions and we should read the content at home." (Student C)

The purpose and processes of evaluation

According to teachers, summative assessments were used for grading but also to support students in identifying their learning gaps and to inform teaching. In comments related to the purpose and processes of evaluation, teachers described that evaluations should be used as a means to promote learning, especially formative assessment. Assessments were viewed by the teachers as diagnostic opportunities that were provided to the students, often through student peer-to-peer interactions.

"We have questions that specifically require them to discuss and interact." (Teacher1)

"There are classes designed so they (the students) can ask questions and in those moments, they can understand what they know and what the others know." (Teacher 7)

Teachers referred to assessments as a means to gauge that student learning was taking place.

"Assessment has something else that is more powerful but rarely seen in place, which is that assessment should also be like a learning moment, and that is not easy." (Teacher 2)

"I conduct a type of Assessment which motivates students and let's students know what is important for them to learn." (Teacher 3)

However, one teacher (Teacher 4) was in dissonance with the others, emphasizing that the purpose of assessments was to rank students.

"The purpose of assessment is to… rank students." (Teacher 4)

Students commented that classes were helpful for self-assessment of their strengths and weakness.

"[the activity] allowed me to see what I didn't know so well, what I need to study more (…) and presented questions which help us to study better (…) [the activity] was important in order to prepare us to the exam." (Student A)

Students reported that teachers provided instant feedback that worked as an important regulator for their learning.

"If students do not answer their questions, they [teachers] will say: «you're doing bad in this part (…) you should study harder» (…). Sometimes teachers make questions and we answer right or wrong (…) teachers say: «you are well or not»." (Student B)

"Teachers will say: «you really need to study»." (Student C)

The congruence between the teachers' espoused and theories-in-use is presented in Table 1, with Illustrative quotes.

Table 1. Congruence between the teachers' espoused and theories-in-use according Weimer's five dimensions

Dimension	Espoused theory	Theories-in-use
The balance of power	"[In classes] I give you something you give me something back and we not always have to agree" (Teacher 2).	Teachers invited student questions and stated that questioning was an important responsibility shared between faculty and students.
The function of content	"Ask questions which do not have to be complicated, but have to make the students to reason a bit" (Teacher 4).	Classroom observations revealed that teachers asked open questions that required students to evoke prior learning.
The role of the teacher	"Is more the role of a facilitator… to encourage students to go looking for things (...). Has the role (...) which is almost like a pointer in the sense that tells them where they should go and look for things and which things they should go and look for" (Teacher 3).	Teachers created opportunities for student peer-to-peer discussions but did not leave the students struggling by themselves.
The responsibility for learning	"[the method adopted in FOS I]is a method that gives them a plenty of freedom on the one hand, but also gives them a lot of responsibility on the other, because they cannot flee to much from the track in the time they have" (Teacher 5).	Students mostly attended classes with the content already studied. One example was a biochemistry class in which students were expected to read a scientific paper; the teachers were only present to orientate the activity and to clarify any questions from the students.
The purpose and processes of evaluation	"assessment (…) allows us, teachers, to understand to what extent we are passing on the information (…) it's a moment of assessment (...) of the quality of our teaching, of the quality of our students, whether they are learning or not" (Teacher 1)	Classroom observation identified that teachers provided constant informal oral feedback in every class.

Discussion

We conducted a case study as a proof of concept that a

mixed-methods approach would be useful for the evaluation of student-centred teaching and learning in undergraduate medical education. The triangulation of our findings from teacher interviews (to identify their espoused theories) and classroom observations and a student focus group (to identify theories in action) revealed that the teachers' vision of student-centredness and their actual teaching was coherent across Weimer's theoretical model of five dimensions of student-centred teaching: "balance of power", "the function of content", "the role of the teacher", "the responsibility for learning" and the "purpose and process of evaluation".

Teachers were aware of the importance of planning classes to engage and motivate students and of passing responsibility on to students. They did not consider themselves as mere content providers. Content was seen as a tool to develop student cognition, to learn general scientific skills (such as literature searches or reading and discussing scientific papers, preparing and presenting a work) and, very importantly, to facilitate the integration of disciplinary content by students. Assessments were considered important to steer student engagement in the learning process. The class observations showed that teachers did not conduct classes in prescriptive ways, instead classes provided opportunities for self-directed learning and peer-to-peer interactions. Teachers guided and stimulated the students, who were the focus of attention. The creation of an informal class environment stimulated students to engage in discussions about content, thus balancing the power in class. There was significant in-class time allocated for such interactions, in which teachers did not present materials, thus passing "responsibility for learning" to students. Frequently, teachers asked questions and provided formative feedback. In summary, there was a shared vision of the overall ethos of the medical programme by the teachers and this was translated into practice.

The perceptions revealed by student interviews were also aligned with the above findings. For example, the students explicitly referred to teachers as their "guides" or "facilitators" and talked about their responsibility to prepare for class and develop their learning they were expected to. In terms of "the purpose and processes of evaluation" students confirmed that teachers provided constant feedback what was an opportunity for regulate their learning.

There was one aspect in which there was dissonance with Weimer's dimensions found when interviewing the students. Students considered they had little control over the selection of content, course policies and assessment methodologies. Nevertheless, students did not make comments that they needed to have such control, suggesting that they were satisfied with the current modus operandi of the course. This is reflected in the very positive results of the final year course questionnaires.[29]

The comparison of findings across teacher interviews and class observations revealed there were common and personal beliefs and practices about student-centredness of teaching and learning. An example of a common belief identified in all of the interviewed teachers was the importance of the teachers' role on the learning process. Teachers wanted to enhance student motivation and participation in their classes, and act as facilitators of the learning process. Interviewed students considered that all faculty shared an identical teaching philosophy aligned with student-centred principles. Such a shared vision suggests there is a common culture about teaching among the course faculty, despite the fact that this was a diverse faculty, which included both clinicians and academics. The faculty did not agree completely on the purpose of assessments. Whereas most teachers mentioned assessment as a tool to improve student learning, there was one faculty member who considered that assessment was only to classify the students. The fact that the study was able to capture diversity across faculty members suggests that the application of our mixed-methods approach can be useful for teacher development purposes.

We consider that the main strength of this study is the complementary mixed-methods approach that evaluated both the of the student–centredness of teaching and learning on the course and also how teachers conceptualise their practice (espoused theories) and their actual practice (theories-in-use). This study's research design uncovered relevant dimensions of teachers' conceptualisations on the construct "student-centredness" which would not have been adequately identified in a questionnaire study. Given the time and resource investment required by this new methodology, we found it a feasible and useful approach to evaluate the student-centredness of teaching and learning on a course within the scope of this case study. As a practice point, we suggest that it may be of use to other courses in other institutions of medical education. In addition, the results of the observation of teachers would be available to be used for the benefit of developing the teachers, as a means to provide formative feedback about their teaching. We did not explore this possibility in the current study.

We recommend that further research is conducted in more courses and institutions to identify if the application of this approach can shed new light into our understanding of how teaching and learning is delivered in courses that describe themselves as student-centred, as well as identifying the extent to which the espoused theories of teachers are coherent with their theories-in-use.

We are aware that our study has several limitations. Interviews with more students and teachers and repetition of interviews to ensure saturation would provide more validity and reliability to our findings. Indeed, a single focus group with four students is probably insufficient to represent the population or to reach data saturation, but we had difficulties with student availability, as students leave for summer holidays shortly after the end of the course. An important key limitation is that we did not evaluate outcome indica-

tors of the course's student-centredness. However, the results of student ratings over the last ten years has shown a consistent high level of student satisfaction with their teaching.[29]

Conclusion

There was a shared and coherent vision on student centredness between the course and programme policies, the beliefs of the teachers, classroom practice and student perceptions. The different pieces of information collected through complementary methods strengthen the argument that the course can be described as student-centred.

Our aim was to develop and consider a new approach to evaluate the student-centredness of teaching and learning in undergraduate medical courses. We consider that the mixed-methods approach that we have developed is potentially useful as an evaluation tool, especially to identify the espoused theories of teachers, both individually and collectively as a group, and the theories in action. The combination of teacher and student interviews with class observations may also prove to be a feasible complementary approach to current course evaluations of student-centredness of teaching and learning based on questionnaires. Despite the fact that this is the first case study conducted to evaluate a new approach, we have gathered information that provides a richer account on the diversity of the student-centredness of teaching and learning on the course and this information can be fed back to the teaching faculty and course directors, for purposes of course development.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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MASTER IN MEDICINE

University of Minho
School of Health Sciences

LONGITUDINAL STUDY- QUESTIONNAIRES

QUESTIONÁRIO DE ADMISSÃO

1º ano – 2014/2015

Caro(a) estudante

Por favor, identifique o seu questionário. A sua identificação é importante para que possamos relacionar as suas respostas ao longo do Estudo Longitudinal. Toda a informação recebida é confidencial e **NÃO FARÁ** parte do seu registo académico. Por favor, leia cada uma das perguntas com atenção antes de responder. Responda de acordo com as instruções. Em caso de dúvida, um representante da ECS que se encontre na sala poderá ajudá-lo.

Todos os dados recolhidos são da responsabilidade da Unidade de Educação Médica que assegura a sua confidencialidade.

Identificação

Nome: _____

Documento de Identificação: _____

Número Mecanográfico: _____

Número de doc. identificação: _____

CONSENTIMENTO

Autorizo a UEM a utilizar os dados recolhidos com o Questionário de Admissão para o ESTUDO LONGITUDINAL que está a desenvolver com os alunos do Curso de Medicina. (descrição do Estudo Longitudinal na última folha do questionário)

Data: ___/___/_____ Assinatura:_____

Mais uma vez, obrigado por colaborar no Estudo Longitudinal. Se tiver alguma questão em relação a este questionário, ou sugestões para melhorias, por favor, contacte o responsável (Manuel João Costa, Prof. Associado da ECS-UM - mmcosta@ecsaude.uminho.pt) ou a investigadora associada ao Projeto (Ana Paula Salgueira, Técnica Superior ECS-UM - meded@ecsaude.uminho.pt) Tel.: +351 253604805. Fax: +351 253604889.

1. **Que idade tinha, aproximadamente, quando decidiu que queria ser médico/a?**

Preencha o espaço com letra legível

_____ anos de idade

2. **Se esteve envolvido em Atividades Extracurriculares durante o Ensino Secundário, por favor descreva a atividade (tema, local, duração) (ex. desporto, voluntariado)?**

_____

_____

_____

Nas seguintes questões, assinale apenas uma opção; assinale a opção escolhida com um ☒; Enganou-se? Preencha por completo o quadrado ■ e assinale com um ☒ a opção correta

3. No final do curso, em que tipo de comunidade gostaria mais de trabalhar?

Cidade de grande dimensão (ex.: Lisboa, Porto)	❑1
Cidade de dimensão moderada (ex.: Braga, Aveiro)	❑2
Cidade de pequena dimensão (ex.: Penafiel, Torres Novas)	❑3
Vila ou zona rural (Ex.: Prado, Aljezur)	❑4

4. No final do curso, em que zona do país gostaria mais de trabalhar?

Litoral, Norte	❑1
Litoral, Centro	❑2
Litoral, Sul	❑3
Interior, Norte	❑4
Interior, Centro	❑5
Interior, Sul	❑6
Regiões Autónomas	❑7
Nenhuma, tenciono ir para outro País	❑8

Nas seguintes questões, para cada item assinale a opção escolhida com um ☒; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correta

Por favor, indique a quantidade (relativa) de tempo profissional que espera passar nas seguintes atividades, depois de terminar a especialidade.

		Nenhum do meu tempo	Algum do meu tempo	A maior parte do meu tempo
5.	Investigação Médica de natureza laboratorial	❑1	❑2	❑3
6.	Investigação Médica de natureza clínica	❑1	❑2	❑3
7.	Prática clínica	❑1	❑2	❑3
8.	Ensino	❑1	❑2	❑3
9.	Administração de uma organização	❑1	❑2	❑3

Depois de terminar a especialidade em quais dos seguintes tipos de atividade gostaria de trabalhar?

		Nenhum interesse	Pouco interesse	Algum interesse	Muito interesse
	Prestação de cuidados assistenciais				
10.	Preferencialmente sozinho	❑0	❑1	❑2	❑3
11.	Inserido numa pequena equipa	❑0	❑1	❑2	❑3
12.	Inserido numa grande equipa	❑0	❑1	❑2	❑3
13.	Saúde Pública/populacional	❑0	❑1	❑2	❑3
14.	Forças Armadas	❑0	❑1	❑2	❑3
15.	Medicina Legal	❑0	❑1	❑2	❑3
16.	Voluntariado/organizações não-governamentais	❑0	❑1	❑2	❑3
17.	Outro	❑0	❑1	❑2	❑3
18.	Qual				

_____

Por favor, indique a quantidade de tempo que espera passar a cuidar de pacientes nos seguintes tipos de instituição:

		Ainda não decidi	Nenhum, ou quase tempo nenhum (menos de 1 dia por semana)	Algum tempo (1 a 3 dias por semana)	A maior parte do tempo (4 ou mais dias por semana)
19.	Hospital Público	❑0	❑1	❑2	❑3
20.	Centro de Saúde	❑0	❑1	❑2	❑3
21.	Grande Clínica ou Hospital Privado	❑0	❑1	❑2	❑3
22.	Pequeno Consultório Privado	❑0	❑1	❑2	❑3

As perguntas seguintes estão relacionadas com rendimentos. Ao responder, assuma que o Euro mantém o seu valor atual. Mesmo que não conheça os rendimentos atuais, por favor, faça a sua melhor estimativa. O nosso interesse não está no seu nível de informação sobre rendimentos, mas na sua perceção sobre as várias especialidades.

Por favor, ordene as seguintes especialidades em função do rendimento mensal bruto (antes de retirar os impostos) **que estima para cada uma delas:**

Numere as suas escolhas a partir do 1= menor rendimento; pode repetir números; preencha o espaço com letra legível

		€
23.	Cirurgia Geral	_____
24.	Medicina Geral e Familiar	_____
25.	Medicina Interna	_____
26.	Obstetrícia/Ginecologia	_____
27.	Oftalmologia	_____
28.	Pediatria	_____
29.	Psiquiatria	_____
30.	Saúde Pública	_____

A decisão de seguir uma carreira, particularmente uma especialidade, é complexa. Nós compreendemos que nesta fase do curso a maior parte dos alunos ainda não tomou uma decisão definitiva. Mesmo assim, gostaríamos de saber que tipo de carreira imagina para si daqui a 10 anos. Por favor, baseie as suas escolhas nas descrições. Os exemplos dados servem de orientação de uma forma geral, mas podem variar de médico para médico.

Numere as suas escolhas de 1 = 1ª escolha a 4 = 4ª escolha; não repita números; preencha o espaço com letra legível

31.	____ª escolha	Realizar diagnósticos ou procedimentos técnicos especializados. Contacto preferencial com pares e colegas. Prática principal em ambiente hospitalar. Exemplo: Radiologia, Patologia.
32.	___ª escolha	Realizar técnicas ou procedimentos terapêuticos especializados que requerem habilidade motora. Prática principal em ambiente hospitalar, com alguma prática em contexto de consultório. Exemplos: Cirurgia Ortopédica, Neurocirurgia, Oftalmologia.
33.	____ª escolha	Providenciar cuidados episódicos ou a longo prazo, a um conjunto específico de problemas médicos, que podem incluir instrumentação e intervenções técnicas. Mistura de ambulatório com prática em ambiente hospitalar. Exemplo: Cardiologia, Gastrenterologia, Psiquiatria, Dermatologia, Medicina Interna.
34.	____ª escolha	Providenciar avaliações iniciais de saúde ou doença, educação e intervenção preventivas e cuidados globais a uma variedade de problemas médicos. Prática principal em contexto de ambulatório. Exemplo: Medicina Geral e Familiar, Pediatria.

Que especialidade considera escolher no futuro?

Na lista de especialidades que se encontra a seguir, cada especialidade está associada a um número. Escreva, de forma legível, os números que correspondem às suas escolhas. Se a especialidade que pretende não se encontra discriminada, escreva 99 e o nome da especialidade em seguida. Se ainda não decidiu, escreva 999. A lista de especialidades está na página seguinte.

35. 1ª escolha _____
36. 2ª escolha _____
37. 3ª escolha _____

Lista de ESPECIALIDADES:

1. Anatomia Patológica
2. Anestesiologia
3. Angiologia e Cirurgia Vascular
4. Cardiologia
5. Cardiologia Pediátrica
6. Cirurgia Cardiotorácica
7. Cirurgia Geral
8. Cirurgia Maxilo-Facial
9. Cirurgia Pediátrica
10. Cirurgia Plástica e Reconstrutiva e Estética
11. Dermato-Venereologia
12. Doenças Infeciosas
13. Endocrinologia e Nutrição
14. Estomatologia
15. Gastrenterologia
16. Genética Médica
17. Ginecologia/Obstetrícia
18. Imunoalergologia
19. Imunohemoterapia
20. Farmacologia Clínica
21. Hematologia Clínica
22. Medicina Desportiva
23. Medicina do Trabalho
24. Medicina Física e de Reabilitação
25. Medicina Geral e Familiar
26. Medicina Interna
27. Medicina Legal
28. Medicina Nuclear
29. Medicina Tropical
30. Nefrologia
31. Neurocirurgia
32. Neurologia
33. Neuroradiologia
34. Oftalmologia
35. Oncologia Médica
36. Ortopedia
37. Otorrinolaringologia
38. Patologia Clínica
39. Pediatria
40. Pneumologia
41. Psiquiatria
42. Psiquiatria da Infância e da Adolescência
43. Radiodiagnóstico
44. Radioterapia
45. Reumatologia
46. Saúde Pública
47. Urologia

99. Outra especialidade

999. Ainda não decidi

38. Por favor, assinale até 4 dos fatores que mais influenciaram na escolha das especialidades assinaladas anteriormente:

NUMERE AS SUAS ESCOLHAS DE 1 = 1º FACTOR, A 4 = 4º FACTOR; NÃO REPITA NÚMEROS; PREENCHA O ESPAÇO COM LETRA LEGÍVEL

____º $fator_1$ Adequação da especialidade às minhas características individuais

____º $fator_2$ Tipo de instituição de formação da especialidade (Hospital/Centro de Saúde/ Instituto nacional de Medicina Legal/ Delegação de Saúde Pública)

____º $fator_3$ Prestígio da instituição de formação da especialidade

____º $fator_4$ Perspetiva de disponibilidade de tempo para a minha vida pessoal

____º $fator_5$ Perspetiva de não fazer urgências

____º $fator_6$ Perspetiva de rendimentos futuros

____º $fator_8$ Especialidade centrada no contacto com os pacientes

____º $fator_9$ Especialidade centrada na tecnologia

____º $fator_{11}$ Perceção de maior competência própria numa área clínica específica

____º $fator_{14}$ Prestígio profissional associado à especialidade

____º $fator_{15}$ Possibilidade de trabalhar com uma grande diversidade de pacientes/situações clínicas

____º $fator_{16}$ Necessidade nacional de médicos de uma determinada especialidade

____º $fator_{18}$ Conteúdo da especialidade

____º $fator_{19}$ Bem estar e qualidade de vida

____º $fator_{20}$ Outra (especifique) _____

Obrigado por participar.

Descrição do projeto

As Sociedades demonstram um interesse e uma exigência cada vez maiores relativamente à qualidade dos médicos e das instituições prestadoras de cuidados de saúde. A Escola de Ciências da Saúde da Universidade do Minho (ECS-UM) está empenhada em proporcionar formação que resulte nos mais altos padrões de humanismo e competências técnica e cognitiva dos seus diplomados. Para o efeito, a ECS-UM investiu num projeto de acompanhamento do percurso profissional dos seus ex-alunos, baseado na caracterização do seu trabalho assistencial - o *Estudo Longitudinal da Escola de Ciências da Saúde da Universidade do Minho.*

O objetivo do Estudo Longitudinal é a melhoria das condições de formação em medicina na ECS-UM a partir da recolha de elementos relativos ao desempenho profissional dos seus diplomados. Desde 1964, que o *Jefferson Medical College* (Filadélfia, USA) desenvolve um projeto de características semelhantes e que lhes tem permitido melhorar a sua qualidade e reputação, assim como a de todos os médicos que nele se formaram.

Os alunos e ex-alunos do curso de Medicina da Escola de Ciências da Saúde da Universidade do Minho são convidados a participar no *Estudo Longitudinal*. O projeto é desenvolvido por uma equipa multidisciplinar sob a responsabilidade do Professor Manuel João Tavares Mendes Costa (Coordenador da Unidade de Educação Médica e Prof. Associado/ ECS-UM). Conta com o privilégio de ter como consultor o Professor Mohammadreza Hojat, o Diretor e Investigador Principal do estudo do *Jefferson Medical College - Center for Research in Medical Education and Health Care*).

Este projeto arrancou oficialmente com a formação dos primeiros médicos pela ECS-UM. Entretanto, a sua relevância foi reconhecida por parte da Fundação para a Ciência e Tecnologia que o financia (Projeto PTDC/ESC/65116/2006 "Avaliando o impacto de inovação no Ensino Superior: implementação e desenvolvimento de um estudo longitudinal numa escola médica").

Todos os elementos de informação recolhidos serão arquivados num banco digital centralizado e de uso restrito gerido pela UEM. Os investigadores associados ao projeto apenas acederão à forma anónima dos dados. A propriedade do arquivo digital será da ECS-UM, que lhe dará apenas o uso enquadrado nos objetivos do Estudo Longitudinal.

Mais uma vez, obrigada por colaborar no Estudo Longitudinal.

Se quiser ficar a saber mais sobre o Estudo Longitudinal, por favor, contacte o investigador responsável (Manuel João Costa, Prof. Associado da ECS-UM - mmcosta@ecsaude.uminho.pt) ou a investigadora associada ao projeto (Ana Paula Salgueira, Técnica Superior ECS-UM - meded@ecsaude.uminho.pt) Tel.: +351 253604805 ou +351 253604826. Fax: +351 253604889.

QUESTIONÁRIO DE GRADUAÇÃO DE 1º CICLO
3º ANO

Caro aluno

Agradecemos a sua colaboração contínua no Estudo Longitudinal da Escola de Ciências da Saúde da Universidade do Minho. Esperamos que esta colaboração se mantenha por muito tempo e que proporcione a realização de novos projectos.

No final da sua licenciatura, solicitamos que preencha o seguinte questionário com dados relativos à sua experiência na Escola de Ciências da Saúde.

Obrigado e até breve.

Por favor, identifique o seu questionário. A identificação é importante para relacionar as suas respostas ao longo do Estudo Longitudinal. Toda a informação recolhida é confidencial e NÃO FARÁ parte do seu registo académico. Por favor, leia cada uma das perguntas com atenção antes de responder. Responda de acordo com as instruções.

Todos os dados recolhidos são da responsabilidade da Unidade de Educação Médica que assegura a sua confidencialidade.

Identificação

Nome: _____

Número Mecanográfico: _____ **Número de B.I.:** _____

CONSENTIMENTO

Autorizo a UEM a utilizar os dados recolhidos com o Questionário de Graduação de 1º Ciclo para o ESTUDO LONGITUDINAL que está a desenvolver com os alunos do Curso de Medicina. (descrição do Estudo Longitudinal na última folha do questionário)

Data: ___/___/_____ Assinatura:

_____

Mais uma vez, obrigado por colaborar no Estudo Longitudinal. Se tiver alguma questão em relação a este questionário, ou sugestões para melhorias, por favor, contacte o responsável (Manuel João Costa, Prof. Associado da ECS-UM - mmcosta@ecsaude.uminho.pt) ou a investigadora associada ao Projecto (Ana Paula Salgueira, Técnica Superior ECS-UM - meded@ecsaude.uminho.pt) Tel.: +351 253604805. Fax: +351 253604889.

1. **Que idade tinha, aproximadamente, quando decidiu que queria ser médico/a?**

Preencha o espaço com letra legível

_____ anos de idade

2. **Antes de decidir definitivamente que seria médico/a, as suas dúvidas em relação a essa opção eram:**

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Baixas ❑$_1$ **Moderadas** ❑$_2$ **Elevadas** ❑$_3$

No final do seu curso, em que tipo de comunidade gostaria mais de trabalhar?

Assinale apenas uma opção; assinalE a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinalE com um ☒ a opção correcta

3. Cidade de grande dimensão (ex.: Lisboa, Porto) ❑$_1$
4. Cidade de dimensão moderada (ex.: Braga, Aveiro) ❑$_2$
5. Cidade de pequena dimensão (ex.: Penafiel, Torres Novas) ❑$_3$
6. Vila ou zona rural (Ex.: Prado, Aljezur) ❑$_4$

No final do seu curso, em zona do país gostaria mais de trabalhar:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinalE com um ☒ a opção correcta

7. Litoral, Norte ❑$_1$
8. Litoral, Centro ❑$_2$
9. Litoral, Sul ❑$_3$
10. Interior, Norte ❑$_4$
11. Interior, Centro ❑$_5$
12. Interior, Sul ❑$_6$
13. Regiões Autónomas ❑$_7$
14. Nenhuma, tenciono ir para outro País ❑$_8$

Por favor, indique a quantidade (relativa) de tempo profissional que espera passar nas seguintes actividades, depois de terminar a especialidade.

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Nenhum do meu tempo	Algum do meu tempo	A maior parte do meu tempo
15.	Investigação Médica de natureza laboratorial	❑1	❑2	❑3
16.	Investigação Médica de natureza clínica	❑1	❑2	❑3
17.	Prática clínica	❑1	❑2	❑3
18.	Ensino	❑1	❑2	❑3
19.	Administração de uma organização	❑1	❑2	❑3

Depois de terminar a especialidade em quais dos seguintes tipos de actividade gostaria de trabalhar?

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Nenhum interesse	Pouco interesse	Algum interesse	Muito interesse
	Prestação de cuidados assistenciais				
20.	Preferencialmente sozinho	❑0	❑1	❑2	❑3
21.	Inserido numa pequena equipa	❑0	❑1	❑2	❑3
22.	Inserido numa grande equipa	❑0	❑1	❑2	❑3
23.	Saúde Pública/populacional	❑0	❑1	❑2	❑3
24.	Forças Armadas	❑0	❑1	❑2	❑3
25.	Medicina Legal	❑0	❑1	❑2	❑3
26.	Voluntariado/organizações não-governamentais	❑0	❑1	❑2	❑3
27.	Outro	❑0	❑1	❑2	❑3
	Qual _____				

Por favor, indique a quantidade de tempo que espera passar a cuidar de pacientes nos seguintes contextos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Ainda não decidi	**Nenhum, ou quase tempo nenhum** (menos de 1 dia por semana)	**Algum tempo** (1 a 3 dias por semana)	**A maior parte do tempo** (4 ou mais dias por semana)
28.	Hospital Público	❑$_0$	❑$_1$	❑$_2$	❑$_3$
29.	Centro de Saúde	❑$_0$	❑$_1$	❑$_2$	❑$_3$
30.	Grande Clínica ou Hospital Privado	❑$_0$	❑$_1$	❑$_2$	❑$_3$
31.	Pequeno Consultório Privado	❑$_0$	❑$_1$	❑$_2$	❑$_3$

As perguntas seguintes estão relacionadas com rendimentos. Ao responder, assuma que o Euro mantém o seu valor actual. Mesmo que não conheça os rendimentos actuais, por favor, faça a sua melhor estimativa. O nosso interesse não está no seu nível de informação sobre rendimentos, mas na sua percepção sobre as várias especialidades.

Por favor, ordene as seguintes especialidades em função do rendimento mensal bruto (antes de retirar os impostos) **que estima para cada uma delas:**

Numere as suas escolhas a partir do 1= menor rendimento; pode repetir números; preencha o espaço com letra legível

		€
32.	Cirurgia Geral	_____
33.	Medicina Geral e Familiar	_____
34.	Medicina Interna	_____
35.	Obstetrícia/Ginecologia	_____
36.	Oftalmologia	_____
37.	Pediatria	_____
38.	Psiquiatria	_____
39.	Saúde Pública	_____

A decisão de seguir uma carreira, particularmente uma especialidade, é complexa. Nós compreendemos que nesta fase do curso a maior parte dos alunos ainda não tomou uma decisão definitiva. Mesmo assim, gostaríamos de saber que tipo de carreira imagina para si daqui a 10 anos. Por favor, baseie as suas escolhas nas descrições. Os exemplos dados servem de orientação de uma forma geral, mas podem variar de médico para médico.

Numere as suas escolhas de 1 = 1ª escolha a 4 = 4ª escolha; não repita números; preencha o espaço com letra legível

40.	____ª escolha	Realizar diagnósticos ou procedimentos técnicos especializados. Contacto preferencial com pares e colegas. Prática principal em ambiente hospitalar. Exemplo: Radiologia, Patologia.
41.	___ª escolha	Realizar técnicas ou procedimentos terapêuticos especializados que requerem habilidade motora. Prática principal em ambiente hospitalar, com alguma prática em contexto de consultório. Exemplos: Cirurgia Ortopédica, Neurocirurgia, Oftalmologia.
42.	____ª escolha	Providenciar cuidados episódicos ou a longo prazo, a um conjunto específico de problemas médicos, que podem incluir instrumentação e intervenções técnicas. Mistura de ambulatório com prática em ambiente hospitalar. Exemplo: Cardiologia, Gastrenterologia, Psiquiatria, Dermatologia, Medicina Interna.
43.	____ª escolha	Providenciar avaliações iniciais de saúde ou doença, educação e intervenção preventivas e cuidados globais a uma variedade de problemas médicos. Prática principal em contexto de ambulatório. Exemplo: Medicina Geral e Familiar, Pediatria.

Que especialidade considera escolher no futuro?

Na lista de especialidades que se encontra a seguir, cada especialidade está associada a um número. Escreva, de forma legível, os números que correspondem às suas escolhas. Se a especialidade que pretende não se encontra discriminada, escreva 99 e o nome da especialidade em seguida. Se ainda não decidiu, escreva 999. A lista de especialidades está na página seguinte.

44. 1ª escolha _____
45. 2ª escolha _____
46. 3ª escolha _____

Lista de ESPECIALIDADES:

1. Anatomia Patológica
2. Anestesiologia
3. Angiologia e Cirurgia Vascular
4. Cardiologia
5. Cardiologia Pediátrica
6. Cirurgia Cardiotorácica
7. Cirurgia Geral
8. Cirurgia Maxilo-Facial
9. Cirurgia Pediátrica
10. Cirurgia Plástica e Reconstrutiva e Estética
11. Dermato-Venereologia
12. Doenças Infecciosas
13. Endocrinologia e Nutrição
14. Estomatologia
15. Gastrenterologia
16. Genética Médica
17. Ginecologia/Obstetrícia
18. Imunoalergologia
19. Imunohemoterapia
20. Farmacologia Clínica
21. Hematologia Clínica
22. Medicina Desportiva
23. Medicina do Trabalho
24. Medicina Física e de Reabilitação
25. Medicina Geral e Familiar
26. Medicina Interna
27. Medicina Legal
28. Medicina Nuclear
29. Medicina Tropical
30. Nefrologia
31. Neurocirurgia
32. Neurologia
33. Neuroradiologia
34. Oftalmologia
35. Oncologia Médica
36. Ortopedia
37. Otorrinolaringologia
38. Patologia Clínica
39. Pediatria
40. Pneumologia
41. Psiquiatria
42. Psiquiatria da Infância e da Adolescência
43. Radiodiagnóstico
44. Radioterapia
45. Reumatologia
46. Saúde Pública
47. Urologia

99. Outra especialidade

999. Ainda não decidi

Por favor, assinale até 4 dos factores que mais influenciaram na escolha das especialidades assinaladas anteriormente:

NUMERE AS SUAS ESCOLHAS DE 1 = 1° FACTOR, A 4 = 4° FACTOR; NÃO REPITA NÚMEROS; PREENCHA O ESPAÇO COM LETRA LEGÍVEL

____º factor Adequação da especialidade às minhas características individuais

____º factor Tipo de instituição de formação da especialidade (Hospital/Centro de Saúde/ Instituto nacional de Medicina Legal/ Delegação de Saúde Pública)

____º factor Prestígio da instituição de formação da especialidade

____º factor Perspectiva de disponibilidade de tempo para a minha vida pessoal

____º factor Perspectiva de não fazer urgências

____º factor Perspectiva de rendimentos futuros

____º factor Duração da especialidade

____º factor Especialidade centrada no contacto com os pacientes

____º factor Especialidade centrada na tecnologia

____º factor Melhor classificação e desempenho em determinadas áreas curriculares/módulos

____º factor Percepção de maior competência própria numa área clínica específica

____º factor Experiência positiva de formação e trabalho nas residências clínicas

____º factor Experiência prévia de um projecto de opção nessa área/especialidade

____º factor Prestígio profissional associado à especialidade

____º factor Possibilidade de trabalhar com uma grande diversidade de pacientes/situações clínicas

____º factor Necessidade nacional de médicos de uma determinada especialidade

____º factor Interacção positiva com docentes, tutores e supervisores

____º factor Conteúdo da especialidade

____º factor Outra (especifique) _____

Por favor, indique o seu nível de satisfação global em relação a cada um dos anos curriculares do Curso de Medicina da Universidade do Minho:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
47.	3º Ano	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de preparação nas seguintes disciplinas cientificas fundamentais:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Pobre	Razoável	Bom	Excelente	Não se aplica
48.	Anatomia	❑1	❑2	❑3	❑4	❑5
49.	Fisiologia	❑1	❑2	❑3	❑4	❑5
50.	Histologia	❑1	❑2	❑3	❑4	❑5
51.	Bioquímica	❑1	❑2	❑3	❑4	❑5
52.	Genética	❑1	❑2	❑3	❑4	❑5
53.	Embriologia	❑1	❑2	❑3	❑4	❑5
54.	Patologia	❑1	❑2	❑3	❑4	❑5
55.	Farmacologia	❑1	❑2	❑3	❑4	❑5
56.	Estatística	❑1	❑2	❑3	❑4	❑5
57.	Saúde Pública	❑1	❑2	❑3	❑4	❑5
58.	Neoplasias	❑1	❑2	❑3	❑4	❑5
59.	Biologia Celular e Molecular	❑1	❑2	❑3	❑4	❑5
60.	Imunologia	❑1	❑2	❑3	❑4	❑5
61.	Microbiologia	❑1	❑2	❑3	❑4	❑5
62.	Psicologia	❑1	❑2	❑3	❑4	❑5
63.	Saúde Comunitária	❑1	❑2	❑3	❑4	❑5
64.	História da Medicina	❑1	❑2	❑3	❑4	❑5
65.	Epidemiologia	❑1	❑2	❑3	❑4	❑5
66.	Bioética e Deontologia Médica	❑1	❑2	❑3	❑4	❑5
67.	Medicina Geral e Familiar	❑1	❑2	❑3	❑4	❑5

Por favor, indique o seu nível de preparação para iniciar as residências clínicas considerando os seguintes aspectos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Discordo Fortemente	Discordo	Neutro	Concordo	Concordo Fortemente
68.	Possuo as competências clínicas necessárias para iniciar as residências clínicas	❑1	❑2	❑3	❑4	❑5
69.	Domino os mecanismos fundamentais de doença, os indicadores clínicos e os princípios de diagnóstico e monitorização para a apresentação comum das patologias	❑1	❑2	❑3	❑4	❑5
70.	Possuo as competências de comunicação necessárias para interagir com os pacientes e profissionais de saúde.	❑1	❑2	❑3	❑4	❑5
71.	Tenho as competências básicas na tomada de decisão clínica	❑1	❑2	❑3	❑4	❑5
72.	Tenho a compreensão acerca das questões fundamentais das ciências sociais na medicina (e.g., ética, humanismo, profissionalismo)	❑1	❑2	❑3	❑4	❑5

Por favor, indique o seu nível de satisfação em relação aos seguintes aspectos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
73.	Apoio na integração na ECS	❑1	❑2	❑3	❑4
74.	Apoio na adaptação às metodologias de ensino/aprendizagem do curso	❑1	❑2	❑3	❑4
75.	Envolvimento activo dos alunos na aprendizagem	❑1	❑2	❑3	❑4
76.	Responsabilização dos alunos pelo processo de auto-aprendizagem	❑1	❑2	❑3	❑4
77.	Oportunidades para trabalho individual e em pequenos grupos	❑1	❑2	❑3	❑4
78.	Motivação para o interesse e/ou prática de investigação	❑1	❑2	❑3	❑4
79.	Oportunidades para realizar investigação	❑1	❑2	❑3	❑4
80.	Oportunidades de contacto com o ICVS	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação com a qualidade do currículo relativamente a:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
81.	Pesquisa e utilização crítica de informação biomédica e clínica	❑1	❑2	❑3	❑4
82.	Estrutura curricular diversificada e flexível, com opções	❑1	❑2	❑3	❑4
83.	Integração das várias disciplinas cientificas fundamentais nas áreas curriculares	❑1	❑2	❑3	❑4
84.	Articulação das ciências biomédicas com a clínica ao longo do curso	❑1	❑2	❑3	❑4
85.	Contributo das actividades laboratoriais para a aprendizagem	❑1	❑2	❑3	❑4
86.	Modelo das Residências Clínicas	❑1	❑2	❑3	❑4
87.	Orientação do currículo para o perfil sanitário do País	❑1	❑2	❑3	❑4
88.	Orientação do currículo para o papel central da Saúde	❑1	❑2	❑3	❑4
89.	Avaliação multidimensional de conhecimentos/competências (compreensão, aplicação, execução, comunicação e comportamento)	❑1	❑2	❑3	❑4
90.	Oportunidade de contacto com os pacientes e a comunidade	❑1	❑2	❑3	❑4
91.	Promoção de relações inter-profissionais (e.g. médico-enfermeiro)	❑1	❑2	❑3	❑4
92.	Ênfase em comportamentos éticos e profissionais	❑1	❑2	❑3	❑4
93.	Prática médica em diferentes cenários	❑1	❑2	❑3	❑4
94.	Ênfase nos factores psicossociais da saúde e da doença	❑1	❑2	❑3	❑4
95.	Promoção da saúde e prevenção da doença	❑1	❑2	❑3	❑4
96.	Aspectos humanísticos da Medicina	❑1	❑2	❑3	❑4
97.	Economia dos cuidados de Saúde	❑1	❑2	❑3	❑4
98.	Metodologias de Investigação/Estatística	❑1	❑2	❑3	❑4
99.	Tecnologia e informática	❑1	❑2	❑3	❑4
100.	Medicina Geriátrica	❑1	❑2	❑3	❑4
101.	Nutrição	❑1	❑2	❑3	❑4
102.	HIV/SIDA	❑1	❑2	❑3	❑4
103.	Saúde Pública	❑1	❑2	❑3	❑4
104.	Prestação de cuidados a doentes crónicos	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação com a formação ao nível das competências profissionais:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Muito Insatisfeito ❑1 **Insatisfeito** ❑2 **Satisfeito** ❑3 **Muito Satisfeito** ❑4

		Contexto Simulado (Laboratório de Aptidões Clínicas)				Contexto Hospitalar/Centro de Saúde			
105.	Recolha da História Clínica	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
106.	Exame Físico	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
107.	Pedido de Informações/Exames de Diagnóstico	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
108.	Elaboração de Diagnóstico Diferencial	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
109.	Devolução de Feedback ao Paciente	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
110.	Prescrição e Educação do Paciente	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
111.	Empatia	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação em relação aos seguintes aspectos do processo de apreciação das áreas curriculares e dos docentes feita pelos alunos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
112.	Momento de entrega dos questionários	❑1	❑2	❑3	❑4
113.	Frequência da avaliação	❑1	❑2	❑3	❑4
114.	Itens avaliados	❑1	❑2	❑3	❑4
115.	Feedback sobre os resultados	❑1	❑2	❑3	❑4
116.	Feedback sobre as consequências	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação em relação à sua interacção com:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
118.	Os docentes	❑1	❑2	❑3	❑4
117.	Tutores nas residências clínicas	❑1	❑2	❑3	❑4
118.	Os funcionários da ECS	❑1	❑2	❑3	❑4
119.	Outros alunos do curso de Medicina	❑1	❑2	❑3	❑4
120.	Alunos de outros cursos	❑1	❑2	❑3	❑4

No geral, sente que, no 3ºano do percurso alternativo, a sua formação na Escola de Ciências da Saúde o preparou para os anos curriculares seguintes:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Muito mal									Extremamente bem
❑1	❑2	❑3	❑4	❑5	❑6	❑7	❑8	❑9	❑10

Aproveite o espaço seguinte para expressar a sua opinião sobre outros temas da sua formação que considere pertinentes.

Preencha o espaço com letra legível

Por favor, indique o seu nível de satisfação em relação aos seguintes serviços e infra-estruturas da Escola de Ciências de Saúde:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Sem opinião (nunca recorri)	**Muito Insatisfeito**	**Insatisfeito**	**Satisfeito**	**Muito Satisfeito**
121.	Biblioteca da Escola de Ciências da Saúde	❑0	❑1	❑2	❑3	❑4
122.	Unidade de Educação Médica	❑0	❑1	❑2	❑3	❑4
123.	Segurança	❑0	❑1	❑2	❑3	❑4
124.	Informática e comunicação electrónica	❑0	❑1	❑2	❑3	❑4
125.	Secretaria da ECS	❑0	❑1	❑2	❑3	❑4
126.	Apoio para actividades extra curriculares	❑0	❑1	❑2	❑3	❑4
127.	Salas de auto-aprendizagem	❑0	❑1	❑2	❑3	❑4
128.	Laboratórios de Ensino	❑0	❑1	❑2	❑3	❑4
129.	Outras salas de aulas	❑0	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação em relação aos seguintes serviços e infra-estruturas da Universidade do Minho:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Sem opinião (nunca recorri)	**Muito Insatisfeito**	**Insatisfeito**	**Satisfeito**	**Muito Satisfeito**
130.	Biblioteca Geral da Universidade do Minho	❑0	❑1	❑2	❑3	❑4
131.	Serviços alimentares (cantina/bar)	❑0	❑1	❑2	❑3	❑4
132.	Serviços Académicos	❑0	❑1	❑2	❑3	❑4
133.	Serviços de Acção Social	❑0	❑1	❑2	❑3	❑4
134.	Recursos informáticos	❑0	❑1	❑2	❑3	❑4
135.	Residências Universitárias	❑0	❑1	❑2	❑3	❑4
136.	Instalações para actividades extra curriculares	❑0	❑1	❑2	❑3	❑4

Por favor, comente a sua experiência no Curso de Medicina da Universidade do Minho. Particularmente, sobre os pontos fortes e fracos do currículo das Áreas Científicas indicadas abaixo. As suas sugestões ajudarão a melhorar a formação médica dos actuais e futuros alunos.

Preencha o espaço com letra legível

Ciências Biológicas e Biomédicas:

Pontos fortes:	
Pontos fracos:	

Ciências Sociais e Humanas:

Pontos fortes:	
Pontos fracos:	

Patologia:

Pontos fortes:	
Pontos fracos:	

Saúde Comunitária:

Pontos fortes:	
Pontos fracos:	

Obrigado por participar.

*Traduzido e adaptado a partir do formulário "Graduation Questionnaire" do Center for Research in Medical Education and Health Care do Jefferson Medical College

Descrição do projecto

As Sociedades demonstram um interesse e uma exigência cada vez maiores relativamente à qualidade dos médicos e das instituições prestadoras de cuidados de saúde. A Escola de Ciências da Saúde da Universidade do Minho (ECS-UM) está empenhada em proporcionar formação que resulte nos mais altos padrões de humanismo e competências técnica e cognitiva dos seus diplomados. Para o efeito, a ECS-UM investiu num projecto de acompanhamento do percurso profissional dos seus ex-alunos, baseado na caracterização do seu trabalho assistencial - o *Estudo Longitudinal da Escola de Ciências da Saúde da Universidade do Minho.*

O objectivo do Estudo Longitudinal é a melhoria das condições de formação em medicina na ECS-UM a partir da recolha de elementos relativos ao desempenho profissional dos seus diplomados. Desde 1964, que o *Jefferson Medical College* (Filadélfia, USA) desenvolve um projecto de características semelhantes e que lhes tem permitido melhorar a sua qualidade e reputação, assim como a de todos os médicos que nele se formaram.

Os alunos e ex-alunos do curso de Medicina da Escola de Ciências da Saúde da Universidade do Minho são convidados a participar no *Estudo Longitudinal*. O projecto é desenvolvido por uma equipa multidisciplinar sob a responsabilidade do Professor Manuel João Tavares Mendes Costa (Coordenador da Unidade de Educação Médica e Prof. Auxiliar/ ECS-UM). Conta com o privilégio de ter como consultor o Professor Mohammadreza Hojat, o Director e Investigador Principal do estudo do *Jefferson Medical College - Center for Research in Medical Education and Health Care*).

Este projecto arrancou oficialmente com a formação dos primeiros médicos pela ECS-UM. Entretanto, a sua relevância foi reconhecida por parte da Fundação para a Ciência e Tecnologia que o financia (Projecto PTDC/ESC/65116/2006 "Avaliando o impacto de inovação no Ensino Superior: implementação e desenvolvimento de um estudo longitudinal numa escola médica").

Todos os elementos de informação recolhidos serão arquivados num banco digital centralizado e de uso restrito gerido pela UEM. Os investigadores associados ao projecto apenas acederão à forma anónima dos dados. A propriedade do arquivo digital será da ECS-UM, que lhe dará apenas o uso enquadrado nos objectivos do Estudo Longitudinal.

Mais uma vez, obrigada por colaborar no Estudo Longitudinal.

Se quiser ficar a saber mais sobre o Estudo Longitudinal, por favor, contacte o investigador responsável (Manuel João Costa, Prof. Associado da ECS-UM - mmcosta@ecsaude.uminho.pt) ou a investigadora associada ao projecto (Ana Paula Salgueira, Técnica Superior ECS-UM - meded@ecsaude.uminho.pt) Tel.: +351 253604805 ou +351 253604826. Fax: +351 253604889.

QUESTIONÁRIO DE GRADUAÇÃO DE MESTRADO
6º ANO

Caro aluno

Agradecemos a sua colaboração contínua no Estudo Longitudinal da Escola de Ciências da Saúde da Universidade do Minho. Esperamos que esta colaboração se mantenha por muito tempo e que proporcione a realização de novos projectos.

No final do seu mestrado, solicitamos que preencha o seguinte questionário com dados relativos à sua experiência na Escola de Ciências da Saúde.

Obrigado e até breve.

Por favor, identifique o seu questionário. A identificação é importante para relacionar as suas respostas ao longo do Estudo Longitudinal. Toda a informação recolhida é confidencial e NÃO FARÁ parte do seu registo académico. Por favor, leia cada uma das perguntas com atenção antes de responder. Responda de acordo com as instruções.

Todos os dados recolhidos são da responsabilidade da Unidade de Educação Médica que assegura a sua confidencialidade.

Identificação

Nome: _____

Número Mecanográfico: _____ **Número de B.I.:** _____

CONSENTIMENTO

Autorizo a UEM a utilizar os dados recolhidos com o Questionário de Graduação de Mestrado para o ESTUDO LONGITUDINAL que está a desenvolver com os alunos do Curso de Medicina. (descrição do Estudo Longitudinal na última folha do questionário)

Data: ___/___/_____ Assinatura: _____

Mais uma vez, obrigado por colaborar no Estudo Longitudinal. Se tiver alguma questão em relação a este questionário, ou sugestões para melhorias, por favor, contacte o responsável (Manuel João Costa, Prof. Auxiliar da ECS-UM - mmcosta@ecsaude.uminho.pt) ou a investigadora associada ao Projecto (Ana Paula Salgueira, Técnica Superior ECS-UM - meded@ecsaude.uminho.pt) Tel.: +351 253604805. Fax: +351 253604889.

1. Que idade tinha, aproximadamente, quando decidiu que queria ser médico/a?

Preencha o espaço com letra legível

_____ anos de idade

2. Antes de decidir definitivamente que seria médico/a, as suas dúvidas em relação a essa opção eram:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Baixas ❑$_1$ **Moderadas** ❑$_2$ **Elevadas** ❑$_3$

No final do seu curso, em que tipo de comunidade gostaria mais de trabalhar?

Assinale apenas uma opção; assinalE a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinalE com um ☒ a opção correcta

3. Cidade de grande dimensão (ex.: Lisboa, Porto) ❑$_1$
4. Cidade de dimensão moderada (ex.: Braga, Aveiro) ❑$_2$
5. Cidade de pequena dimensão (ex.: Penafiel, Torres Novas) ❑$_3$
6. Vila ou zona rural (Ex.: Prado, Aljezur) ❑$_4$

No final do seu curso, em zona do país gostaria mais de trabalhar:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinalE com um ☒ a opção correcta

7. Litoral, Norte ❑$_1$
8. Litoral, Centro ❑$_2$
9. Litoral, Sul ❑$_3$
10. Interior, Norte ❑$_4$
11. Interior, Centro ❑$_5$
12. Interior, Sul ❑$_6$
13. Regiões Autónomas ❑$_7$
14. Nenhuma, tenciono ir para outro País ❑$_8$

Por favor, indique a quantidade (relativa) de tempo profissional que espera passar nas seguintes actividades, depois de terminar a especialidade.

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Nenhum do meu tempo	Algum do meu tempo	A maior parte do meu tempo
15.	Investigação Médica de natureza laboratorial	❑1	❑2	❑3
16.	Investigação Médica de natureza clínica	❑1	❑2	❑3
17.	Prática clínica	❑1	❑2	❑3
18.	Ensino	❑1	❑2	❑3
19.	Administração de uma organização	❑1	❑2	❑3

Depois de terminar a especialidade em quais dos seguintes tipos de actividade gostaria de trabalhar?

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Nenhum interesse	Pouco interesse	Algum interesse	Muito interesse
	Prestação de cuidados assistenciais				
20.	Preferencialmente sozinho	❑0	❑1	❑2	❑3
21.	Inserido numa pequena equipa	❑0	❑1	❑2	❑3
22.	Inserido numa grande equipa	❑0	❑1	❑2	❑3
23.	Saúde Pública/populacional	❑0	❑1	❑2	❑3
24.	Forças Armadas	❑0	❑1	❑2	❑3
25.	Medicina Legal	❑0	❑1	❑2	❑3
26.	Voluntariado/organizações não governamentais	❑0	❑1	❑2	❑3
27.	Outro	❑0	❑1	❑2	❑3

Qual _____

Por favor, indique a quantidade de tempo que espera passar a cuidar de pacientes nos seguintes contextos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Ainda não decidi	**Nenhum, ou quase tempo nenhum** (menos de 1 dia por semana)	**Algum tempo** (1 a 3 dias por semana)	**A maior parte do tempo** (4 ou mais dias por semana)
28.	Hospital Público	❑0	❑1	❑2	❑3
29.	Centro de Saúde	❑0	❑1	❑2	❑3
30.	Grande Clínica ou Hospital Privado	❑0	❑1	❑2	❑3
31.	Pequeno Consultório Privado	❑0	❑1	❑2	❑3

As perguntas seguintes estão relacionadas com rendimentos. Ao responder, assuma que o Euro mantém o seu valor actual. Mesmo que não conheça os rendimentos actuais, por favor, faça a sua melhor estimativa. O nosso interesse não está no seu nível de informação sobre rendimentos, mas na sua percepção sobre as várias especialidades.

Por favor, ordene as seguintes especialidades em função do rendimento mensal bruto (antes de retirar os impostos) **que estima para cada uma delas:**

Numere as suas escolhas a partir do 1= menor rendimento; pode repetir números; preencha o espaço com letra legível

		€
32.	Cirurgia Geral	_____
33.	Medicina Geral e Familiar	_____
34.	Medicina Interna	_____
35.	Obstetrícia/Ginecologia	_____
36.	Oftalmologia	_____
37.	Pediatria	_____
38.	Psiquiatria	_____
39.	Saúde Pública	_____

A decisão de seguir uma carreira, particularmente uma especialidade, é complexa. Nós compreendemos que nesta fase do curso a maior parte dos alunos ainda não tomou uma decisão definitiva. Mesmo assim, gostaríamos de saber que tipo de carreira imagina para si daqui a 10 anos. Por favor, baseie as suas escolhas nas descrições. Os exemplos dados servem de orintação de uma forma geral, mas podem variar de médico para médico.

Numere as suas escolhas de 1 = 1ª escolha a 4 = 4ª escolha; não repita números; preencha o espaço com letra legível

40.	____ª escolha	Realizar diagnósticos ou procedimentos técnicos especializados. Contacto preferencial com pares e colegas. Prática principal em ambiente hospitalar. Exemplo: Radiologia, Patologia.
41.	___ª escolha	Realizar técnicas ou procedimentos terapêuticos especializados que requerem habilidade motora. Prática principal em ambiente hospitalar, com alguma prática em contexto de consultório. Exemplos: Cirurgia Ortopédica, Neurocirurgia, Oftalmologia.
42.	____ª escolha	Providenciar cuidados episódicos ou a longo prazo, a um conjunto específico de problemas médicos, que podem incluir instrumentação e intervenções técnicas. Mistura de ambulatório com prática em ambiente hospitalar. Exemplo: Cardiologia, Gastrenterologia, Psiquiatria, Dermatologia, Medicina Interna.
43.	____ª escolha	Providenciar avaliações iniciais de saúde ou doença, educação e intervenção preventivas e cuidados globais a uma variedade de problemas médicos. Prática principal em contexto de ambulatório. Exemplo: Medicina Geral e Familiar, Pediatria.

Que especialidade considera escolher no futuro?

Na lista de especialidades que se encontra a seguir, cada especialidade está associada a um número. Escreva, de forma legível, os números que correspondem às suas escolhas. Se a especialidade que pretende não se encontra discriminada, escreva 99 e o nome da especialidade em seguida. Se ainda não decidiu, escreva 999. A lista de especialidades está na página seguinte.

44. 1ª escolha _____
45. 2ª escolha _____
46. 3ª escolha _____

Lista de ESPECIALIDADES:

1. Anatomia Patológica
2. Anestesiologia
3. Angiologia e Cirurgia Vascular
4. Cardiologia
5. Cardiologia Pediátrica
6. Cirurgia Cardiotorácica
7. Cirurgia Geral
8. Cirurgia Maxilo-Facial
9. Cirurgia Pediátrica
10. Cirurgia Plástica e Reconstrutiva e Estética
11. Dermato-Venereologia
12. Doenças Infecciosas
13. Endocrinologia e Nutrição
14. Estomatologia
15. Gastrenterologia
16. Genética Médica
17. Ginecologia/Obstetrícia
18. Imunoalergologia
19. Imunohemoterapia
20. Farmacologia Clínica
21. Hematologia Clínica
22. Medicina Desportiva
23. Medicina do Trabalho
24. Medicina Física e de Reabilitação
25. Medicina Geral e Familiar
26. Medicina Interna
27. Medicina Legal
28. Medicina Nuclear
29. Medicina Tropical
30. Nefrologia
31. Neurocirurgia
32. Neurologia
33. Neuroradiologia
34. Oftalmologia
35. Oncologia Médica
36. Ortopedia
37. Otorrinolaringologia
38. Patologia Clínica
39. Pediatria
40. Pneumologia
41. Psiquiatria
42. Psiquiatria da Infância e da Adolescência
43. Radiodiagnóstico
44. Radioterapia
45. Reumatologia
46. Saúde Pública
47. Urologia

99. Outra especialidade

999. Ainda não decidi

Por favor, assinale até 4 dos factores que mais influenciaram na escolha das especialidades assinaladas anteriormente:

NUMERE AS SUAS ESCOLHAS DE 1 = 1° FACTOR, A 4 = 4° FACTOR; NÃO REPITA NÚMEROS; PREENCHA O ESPAÇO COM LETRA LEGÍVEL

____º factor Adequação da especialidade às minhas características individuais

____º factor Tipo de instituição de formação da especialidade (Hospital/Centro de Saúde/ Instituto nacional de Medicina Legal/ Delegação de Saúde Pública)

____º factor Prestígio da instituição de formação da especialidade

____º factor Perspectiva de disponibilidade de tempo para a minha vida pessoal

____º factor Perspectiva de não fazer urgências

____º factor Perspectiva de rendimentos futuros

____º factor Duração da especialidade

____º factor Especialidade centrada no contacto com os pacientes

____º factor Especialidade centrada na tecnologia

____º factor Melhor classificação e desempenho em determinadas áreas curriculares/módulos

____º factor Percepção de maior competência própria numa área clínica específica

____º factor Experiência positiva de formação e trabalho nas residências clínicas

____º factor Experiência prévia de um projecto de opção nessa área/especialidade

____º factor Prestígio profissional associado à especialidade

____º factor Possibilidade de trabalhar com uma grande diversidade de pacientes/situações clínicas

____º factor Necessidade nacional de médicos de uma determinada especialidade

____º factor Interacção positiva com docentes, tutores e supervisores

____º factor Conteúdo da especialidade

____º factor Outra (especifique) _____

Por favor, indique o seu nível de satisfação global em relação a cada um dos anos curriculares do Curso de Medicina da Universidade do Minho:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
66.	1º Ano	❑1	❑2	❑3	❑4
67.	2º Ano	❑1	❑2	❑3	❑4
68.	3º Ano	❑1	❑2	❑3	❑4
69.	4º Ano	❑1	❑2	❑3	❑4
70.	5º Ano	❑1	❑2	❑3	❑4
71.	6º Ano	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de preparação nas seguintes disciplinas cientificas fundamentais:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Pobre	Razoável	Bom	Excelente	Não se aplica
72.	Anatomia	❑1	❑2	❑3	❑4	❑5
73.	Fisiologia	❑1	❑2	❑3	❑4	❑5
74.	Histologia	❑1	❑2	❑3	❑4	❑5
75.	Bioquímica	❑1	❑2	❑3	❑4	❑5
76.	Genética	❑1	❑2	❑3	❑4	❑5
77.	Embriologia	❑1	❑2	❑3	❑4	❑5
78.	Patologia	❑1	❑2	❑3	❑4	❑5
79.	Farmacologia	❑1	❑2	❑3	❑4	❑5
80.	Estatística	❑1	❑2	❑3	❑4	❑5
81.	Saúde Pública	❑1	❑2	❑3	❑4	❑5
82.	Neoplasias	❑1	❑2	❑3	❑4	❑5
83.	Biologia Celular e Molecular	❑1	❑2	❑3	❑4	❑5
84.	Imunologia	❑1	❑2	❑3	❑4	❑5
85.	Microbiologia	❑1	❑2	❑3	❑4	❑5
86.	Psicologia	❑1	❑2	❑3	❑4	❑5
87.	Saúde Comunitária	❑1	❑2	❑3	❑4	❑5
88.	História da Medicina	❑1	❑2	❑3	❑4	❑5
89.	Epidemiologia	❑1	❑2	❑3	❑4	❑5
90.	Bioética e Deontologia Médica	❑1	❑2	❑3	❑4	❑5
91.	Medicina Geral e Familiar	❑1	❑2	❑3	❑4	❑5

Por favor, indique o seu nível de preparação para iniciar as residências clínicas considerando os seguintes aspectos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Discordo Fortemente	Discordo	Neutro	Concordo	Concordo Fortemente
92.	Possuo as competências clínicas necessárias para iniciar as residências clínicas	❑1	❑2	❑3	❑4	❑5
93.	Domino os mecanismos fundamentais de doença, os indicadores clínicos e os princípios de diagnóstico e monitorização para a apresentação comum das patologias	❑1	❑2	❑3	❑4	❑5
94.	Possuo as competências de comunicação necessárias para interagir com os pacientes e profissionais de saúde.	❑1	❑2	❑3	❑4	❑5
95.	Tenho as competências básicas na tomada de decisão clínica	❑1	❑2	❑3	❑4	❑5
96.	Tenho a compreensão acerca das questões fundamentais das ciências sociais na medicina (e.g., ética, humanismo, profissionalismo)	❑1	❑2	❑3	❑4	❑5

Por favor, indique o seu nível de satisfação em relação aos seguintes aspectos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
97.	Apoio na integração na ECS	❑1	❑2	❑3	❑4
98.	Apoio na adaptação às metodologias de ensino/aprendizagem do curso	❑1	❑2	❑3	❑4
99.	Envolvimento activo dos alunos na aprendizagem	❑1	❑2	❑3	❑4
100.	Responsabilização dos alunos pelo processo de auto-aprendizagem	❑1	❑2	❑3	❑4
101.	Oportunidades para trabalho individual e em pequenos grupos	❑1	❑2	❑3	❑4
102.	Motivação para o interesse e/ou prática de investigação	❑1	❑2	❑3	❑4
103.	Oportunidades para realizar investigação	❑1	❑2	❑3	❑4
104.	Oportunidades de contacto com o ICVS	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação com a qualidade do currículo relativamente a:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
105.	Pesquisa e utilização crítica de informação biomédica e clínica	❑1	❑2	❑3	❑4
106.	Estrutura curricular diversificada e flexível, com opções	❑1	❑2	❑3	❑4
107.	Integração das várias disciplinas cientificas fundamentais nas áreas curriculares	❑1	❑2	❑3	❑4
108.	Articulação das ciências biomédicas com a clínica ao longo do curso	❑1	❑2	❑3	❑4
109.	Contributo das actividades laboratoriais para a aprendizagem	❑1	❑2	❑3	❑4
110.	Modelo das Residências Clínicas	❑1	❑2	❑3	❑4
111.	Orientação do currículo para o perfil sanitário do País	❑1	❑2	❑3	❑4
112.	Orientação do currículo para o papel central da Saúde	❑1	❑2	❑3	❑4
113.	Avaliação multidimensional de conhecimentos/competências (compreensão, aplicação, execução, comunicação e comportamento)	❑1	❑2	❑3	❑4
114.	Oportunidade de contacto com os pacientes e a comunidade	❑1	❑2	❑3	❑4
115.	Promoção de relações inter-profissionais (e.g. médico-enfermeiro)	❑1	❑2	❑3	❑4
116.	Ênfase em comportamentos éticos e profissionais	❑1	❑2	❑3	❑4
117.	Prática médica em diferentes cenários	❑1	❑2	❑3	❑4
118.	Ênfase nos factores psicossociais da saúde e da doença	❑1	❑2	❑3	❑4
119.	Promoção da saúde e prevenção da doença	❑1	❑2	❑3	❑4
120.	Aspectos humanísticos da Medicina	❑1	❑2	❑3	❑4
121.	Economia dos cuidados de Saúde	❑1	❑2	❑3	❑4
122.	Metodologias de Investigação/Estatística	❑1	❑2	❑3	❑4
123.	Tecnologia e informática	❑1	❑2	❑3	❑4
124.	Medicina Geriátrica	❑1	❑2	❑3	❑4
125.	Nutrição	❑1	❑2	❑3	❑4
126.	HIV/SIDA	❑1	❑2	❑3	❑4
127.	Saúde Pública	❑1	❑2	❑3	❑4
128.	Prestação de cuidados a doentes crónicos	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação com a formação ao nível das competências profissionais:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Muito Insatisfeito ❑1 **Insatisfeito** ❑2 **Satisfeito** ❑3 **Muito Satisfeito** ❑4

		Contexto Simulado (Laboratório de Aptidões Clínicas)				**Contexto Hospitalar/Centro de Saúde**			
129.	Recolha da História Clínica	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
130.	Exame Físico	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
131.	Pedido de Informações/Exames de Diagnóstico	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
132.	Elaboração de Diagnóstico Diferencial	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
133.	Devolução de Feedback ao Paciente	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
134.	Prescrição e Educação do Paciente	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4
135.	Empatia	❑1	❑2	❑3	❑4	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação em relação aos seguintes aspectos do processo de apreciação das áreas curriculares e dos docentes feita pelos alunos:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	**Insatisfeito**	**Satisfeito**	**Muito Satisfeito**
	Momento de entrega dos questionários				
136.	– Nas áreas científicas não clínicas	❑1	❑2	❑3	❑4
137.	– Nas áreas clínicas	❑1	❑2	❑3	❑4
	Frequência da avaliação				
138.	– Nas áreas científicas não clínicas	❑1	❑2	❑3	❑4
139.	– Nas áreas clínicas	❑1	❑2	❑3	❑4
	Itens avaliados				
140.	– Nas áreas científicas não clínicas	❑1	❑2	❑3	❑4
141.	– Nas áreas clínicas	❑1	❑2	❑3	❑4
	Feedback sobre os resultados				
142.	– Nas áreas científicas não clínicas	❑1	❑2	❑3	❑4
143.	– Nas áreas clínicas	❑1	❑2	❑3	❑4
	Feedback sobre as consequências	❑1	❑2	❑3	❑4
144.	– Nas áreas científicas não clínicas	❑1	❑2	❑3	❑4
145.	– Nas áreas clínicas	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação em relação à sua interacção com:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Muito Insatisfeito	Insatisfeito	Satisfeito	Muito Satisfeito
	Os docentes				
146.	– Nas áreas curriculares Biomédicas (MCs, SOFs, BPT)	❑1	❑2	❑3	❑4
	– Nas áreas curriculares transversais (AF, DVs)				
147.	– Nas áreas científicas não clínicas	❑1	❑2	❑3	❑4
148.	– Nas áreas clínicas	❑1	❑2	❑3	❑4
149.	Tutores nas residências clínicas	❑1	❑2	❑3	❑4
	Os funcionários da ECS				
150.	– Nos 3 primeiros anos	❑1	❑2	❑3	❑4
151.	– Nos 3 últimos anos	❑1	❑2	❑3	❑4
152.	Outros alunos do curso de Medicina				
153.	– Nos 3 primeiros anos	❑1	❑2	❑3	❑4
154.	– Nos 3 últimos anos	❑1	❑2	❑3	❑4
155.	Alunos de outros cursos				
156.	– Nos 3 primeiros anos	❑1	❑2	❑3	❑4
157.	– Nos 3 últimos anos	❑1	❑2	❑3	❑4

No geral, sente que, nos primeiros 3 anos de curso, a sua formação na Escola de Ciências da Saúde o preparou para os anos curriculares seguintes:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Muito mal									Extremamente bem
❑1	❑2	❑3	❑4	❑5	❑6	❑7	❑8	❑9	❑10

No geral, sente que a sua formação na Escola de Ciências da Saúde, até à data, o preparou para o exercício da profissão de médico:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

Muito mal									Extremamente bem
❑1	❑2	❑3	❑4	❑5	❑6	❑7	❑8	❑9	❑10

Aproveite o espaço seguinte para expressar a sua opinião sobre outros temas da sua formação que considere pertinentes.

Preencha o espaço com letra legível

Por favor, indique o seu nível de satisfação em relação aos seguintes serviços e infra-estruturas da Escola de Ciências de Saúde:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Sem opinião (nunca recorri)	**Muito Insatisfeito**	**Insatisfeito**	**Satisfeito**	**Muito Satisfeito**
158.	Biblioteca da Escola de Ciências da Saúde	❑0	❑1	❑2	❑3	❑4
159.	Unidade de Educação Médica	❑0	❑1	❑2	❑3	❑4
160.	Segurança	❑0	❑1	❑2	❑3	❑4
161.	Informática e comunicação electrónica	❑0	❑1	❑2	❑3	❑4
162.	Secretaria da ECS	❑0	❑1	❑2	❑3	❑4
163.	Apoio para actividades extra curriculares	❑0	❑1	❑2	❑3	❑4
164.	Salas de auto-aprendizagem	❑0	❑1	❑2	❑3	❑4
165.	Laboratórios de Ensino	❑0	❑1	❑2	❑3	❑4
166.	Outras salas de aulas	❑0	❑1	❑2	❑3	❑4

Por favor, indique o seu nível de satisfação em relação aos seguintes serviços e infra-estruturas da Universidade do Minho:

Assinale apenas uma opção; assinale a opção escolhida para cada item com um ☒ ; em caso de engano, preencha por completo o quadrado ■ e assinale com um ☒ a opção correcta

		Sem opinião (nunca recorri)	**Muito Insatisfeito**	**Insatisfeito**	**Satisfeito**	**Muito Satisfeito**
167.	Biblioteca Geral da Universidade do Minho	❑0	❑1	❑2	❑3	❑4
168.	Serviços alimentares (cantina/bar)	❑0	❑1	❑2	❑3	❑4
169.	Serviços Académicos	❑0	❑1	❑2	❑3	❑4
170.	Serviços de Acção Social	❑0	❑1	❑2	❑3	❑4
171.	Recursos informáticos	❑0	❑1	❑2	❑3	❑4
172.	Residências Universitárias	❑0	❑1	❑2	❑3	❑4
173.	Instalações para actividades extra curriculares	❑0	❑1	❑2	❑3	❑4

Por favor, comente a sua experiência no Curso de Medicina da Universidade do Minho. Particularmente, sobre os pontos fortes e fracos do currículo das Áreas Científicas indicadas abaixo. As suas sugestões ajudarão a melhorar a formação médica dos actuais e futuros alunos.

Preencha o espaço com letra legível

Apoio da ECS na transição ensino secundário/superior

Pontos fortes:	
Pontos fracos:	

Ciências Biológicas e Biomédicas:

Pontos fortes:	
Pontos fracos:	

Por favor, comente a sua experiência no Curso de Medicina da Universidade do Minho. Particularmente, sobre os pontos fortes e fracos do currículo das Áreas Científicas indicadas abaixo. As suas sugestões ajudarão a melhorar a formação médica dos actuais e futuros alunos. (continuação)

Preencha o espaço com letra legível

Ciências Sociais e Humanas:

Pontos fortes:	
Pontos fracos:	

Patologia:

Pontos fortes:	
Pontos fracos:	

Por favor, comente a sua experiência no Curso de Medicina da Universidade do Minho. Particularmente, sobre os pontos fortes e fracos do currículo das Áreas Científicas indicadas abaixo. As suas sugestões ajudarão a melhorar a formação médica dos actuais e futuros alunos. (continuação)

Preencha o espaço com letra legível

Saúde Comunitária:

Pontos fortes:	
Pontos fracos:	

Obrigado por participar.

*Traduzido e adaptado a partir do formulário "Graduation Questionnaire" do Center for Research in Medical Education and Health Care do Jefferson Medical College

Descrição do projecto

As Sociedades demonstram um interesse e uma exigência cada vez maiores relativamente à qualidade dos médicos e das instituições prestadoras de cuidados de saúde. A Escola de Ciências da Saúde da Universidade do Minho (ECS-UM) está empenhada em proporcionar formação que resulte nos mais altos padrões de humanismo e competências técnica e cognitiva dos seus diplomados. Para o efeito, a ECS-UM investiu num projecto de acompanhamento do percurso profissional dos seus ex-alunos, baseado na caracterização do seu trabalho assistencial - o *Estudo Longitudinal da Escola de Ciências da Saúde da Universidade do Minho.*

O objectivo do Estudo Longitudinal é a melhoria das condições de formação em medicina na ECS-UM a partir da recolha de elementos relativos ao desempenho profissional dos seus diplomados. Desde 1964, que o *Jefferson Medical College* (Filadélfia, USA) desenvolve um projecto de características semelhantes e que lhes tem permitido melhorar a sua qualidade e reputação, assim como a de todos os médicos que nele se formaram.

Os alunos e ex-alunos do curso de Medicina da Escola de Ciências da Saúde da Universidade do Minho são convidados a participar no *Estudo Longitudinal*. O projecto é desenvolvido por uma equipa multidisciplinar sob a responsabilidade do Professor Manuel João Tavares Mendes Costa (Coordenador da Unidade de Educação Médica e Prof. Auxiliar/ ECS-UM). Conta com o privilégio de ter como consultor o Professor Mohammadreza Hojat, o Director e Investigador Principal do estudo do *Jefferson Medical College - Center for Research in Medical Education and Health Care*).

Este projecto arrancou oficialmente com a formação dos primeiros médicos pela ECS-UM. Entretanto, a sua relevância foi reconhecida por parte da Fundação para a Ciência e Tecnologia que o financia (Projecto PTDC/ESC/65116/2006 "Avaliando o impacto de inovação no Ensino Superior: implementação e desenvolvimento de um estudo longitudinal numa escola médica").

Todos os elementos de informação recolhidos serão arquivados num banco digital centralizado e de uso restrito gerido pela UEM. Os investigadores associados ao projecto apenas acederão à forma anónima dos dados. A propriedade do arquivo digital será da ECS-UM, que lhe dará apenas o uso enquadrado nos objectivos do Estudo Longitudinal.

Mais uma vez, obrigada por colaborar no Estudo Longitudinal.

Se quiser ficar a saber mais sobre o Estudo Longitudinal, por favor, contacte o investigador responsável (Manuel João Costa, Prof. Associado da ECS-UM - mmcosta@ecsaude.uminho.pt) ou a investigadora associada ao projecto (Ana Paula Salgueira, Técnica Superior ECS-UM - meded@ecsaude.uminho.pt) Tel.: +351 253604805 ou +351 253604826. Fax: +351 253604889.