

## General Course Principles and Guide to the Scientific English Syllabus for the Bari English Medical Curriculum (BEMC) Degree Course in Medicine 2015-16 Academic Year

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### 1. Introductory premise

This premise to this University course, which is designed to encourage learning and assessment of specialist biomedical competences, rests on a basic principle: English is not just the official language in all scientific contexts such as research, training or continuing education in Medicine. On the contrary, in a scenario marked by strong vocational dynamics and an increasingly strong drive towards greater social mobility for medical and healthcare personnel, knowledge and proficiency in English, whether in Italy or abroad, can no longer be associated with the pre-scholastic or scholastic A1-to-B1 levels of the European CEFR scale and even less with the idea of “absolute beginners” who have little or no chance of gaining early or stable entry into the workplace. The Italian Ministry responsible for Universities lays down quite clearly the need for high-quality training based on sound scientific and teaching principles in which the skills required in the medical profession are learnt and implemented.

### 2. The place of English in the Medical Curriculum

The current Medical syllabus provides for the course contents to be covered in alternate years: second year (2 CFU/ECTS credits); fourth year (2 CFU/ECTS credits) and sixth year (1CFU/ECTS credit). In all likelihood, the intention behind this was to ensure students gradually assimilate the various aspects involved more thoroughly, not just English morphosyntax but also the following: historical and cultural aspects relating to the evolution of Medicine; study of systems and signs in communication; study of specialist medical terminology; development of advanced medical and healthcare skills including interactions with patients, requesting and carrying out diagnostic tests and writing up medical reports or case histories. The student’s course of study is thus vocationally oriented: as students acquire medical and clinical expertise, their ability to interpret and describe specialist documents in English is also expected to increase. In other words, in the course of six years of study, a student’s capacity to interpret medical texts and films should grow thanks to familiarity with medical genres and their visual and verbal conventions.

Whether or not English is the student’s mother tongue, this vocational orientation towards English allows future doctors to acquire knowledge and communicative competence in English steadily and on a self-learning basis, for example through access to online portals and archives such as *PubMed* and *Cochrane*. The course in English should thus not be interpreted in terms of study limited to the years in which the course is formally taught but instead as a continuous learning period that encourages constant revision and recontextualisation of the medical content and communicative experiences presented by the teacher in increasingly specialised settings.

In a context of excellence, supplementary activities will be promoted such as seminars and invited lectures in English and tutoring activities that encourage study in those years when the course is not formally taught. Clearly, both teaching staff and students need to be assisted in the organization of these additional activities, since there is a clear gap between the hours of study laid down in the curriculum and the

requirements laid down by authoritative institutions such as the *General Medical Council* which oversees medical careers in the UK and which insists on a very high level of competence in English.

### 3. Course Content and Goals: General principles underlying the course in scientific English for medical students.

In the light of what has been stated above, following a preliminary review of English morphosyntax, the course focuses on themes relating to healthcare in hospital wards in Italy and abroad with particular reference to management and communication systems. This requires students in the course of their six years of study to reflect on the micro/macro structures of scientific English in medical and healthcare settings and the micro and macro skills associated with these contexts.

#### a) Microstructures

The term *microstructures* refers to revision of what should have been learnt at school in relation to the morphosyntax of English. This includes the verb system and, in particular, the role of verbs and verb aspect in English medical discourse as well as the functions of adverbs, pronouns, prepositions and conjunctions in affirmative, negative, interrogative, modal, subordinate, temporal, concessive, consecutive, conditional, adversative, dubitative, passive, impersonal, infinitival and hypothetical clauses in keeping with the principle that “among its syntactic structures, scientific discourse privileges those which allow the agent to be sidelined or removed altogether through the use of passive, nominalizing, impersonal, and non-finite constructions” (see the entry for Michele A. Cortelazzo on the *Accademia della Crusca* website). The commonest grammatical microstructures in scientific discourse thus need to be thoroughly revised. These include: 1) the use of nouns to express abstract processes (*nominalisation*) and the effects abstract expression has on negative, demonstrative (*use of the definite article*) and interrogative clauses in scientific discourse; 2) the role of the verb and other parts of speech in expressing opinions, probabilities, possibilities and hypotheses (*modality*); 3) quantification and expression of statistical data; 4) expressing comparisons; 5) expressing sequences of events; 6) the use of acronyms, initialisms and abbreviations in medical discourse; 7) agency suppression and deletion.

#### b) Macrostructures

In our early childhood, drawing and storytelling constitute the main ways through which we recount our experiences of the world and perceive the experiences of others. Steady acquisition of increasingly complex and specialized genres goes hand in hand with our cognitive development. Such genres are the keys to power and prestige in society as they define the boundary between insiders and outsiders, between experts and non-experts. In the world of medicine, for example, the space reserved for the *Case Report* in international medical journals has steadily declined over the years as compared with the *Research Article*, a much more demanding genre in terms of both the medical knowledge and linguistic microstructures that it presupposes. Only those *Case Reports* that express rare or unique features are likely to be published nowadays. Even so, knowing how to analyze, write and/or describe a *Case Report* is an important achievement for a medical student, as well as an essential step in the vocational training that turns the trainee into a professional. The macrostructure of the *Case Report* will almost always follow a fixed series of steps in which the initial case presentation will be followed by: a) the survey undertaken (examination of the patient, laboratory tests etc.); b) the outcome; c) assessment under the following headings: *Case description; Case history; Condition; Tests; Diagnosis; Treatment; Response to treatment; Further tests; Complications; Further tests; Referral; Adjustment; Outcome; Follow-up*. Each of these steps requires reflection on the microstructures to be adopted and hence constant practice to ensure proficiency in scientific English in the healthcare domain. Understanding the relationship between macrostructure and microstructure is not limited merely to the *Research article* or *Case Report* but involves many other written, oral and multimedia medical genres that need to be explored in the six years of study. By way of exemplification, we may mention: *Handovers; Discharge Summaries; Guidelines; Protocols, Algorithms, Physical Examination Write-Ups; Patient Interviews, Patient Counselling; Consultations*. Medical students' encounters with increasingly complex genres should not exclude recourse to experiences acquired in early schooling. A good narrative component, for example, is a typical feature of the best *Case Reports* and *Research Articles*.

### c) *Microskills*

It goes without saying that trainee doctors should be proficient as regards the microskills involved in the reception (mainly listening and reading) and production of English (mainly speaking and writing). This is what is taught and assessed at school and in international certificates (e.g. *Cambridge, IELTS, TOEFL, Trinity*). Mastery of microskills includes an ability to parse individual words in both written and spoken modalities with reference to the grammatical categories (verb, noun etc.) they instantiate, as well as the ability to recognize recurrent syntactic and lexicogrammatical patterns. Above all, mastery of microskills requires recognition of the distinctive sounds of English phonology, its intonation and stress patterns attributed to words in marked and unmarked positions, as exemplified in particular by the reduced forms of words (e.g. *it's* as opposed to *it is*). It also requires: recognition of various aspects of textual cohesion; identification of markedness; an ability to use reformulation strategies, correctly judging the degree of comprehension patients can achieve; recognising and responding to calls for help from them. The correct management of microskills in English also includes recognising the main differences between different varieties of English (in particular American and British) as well as knowing how to use idiomatic structures (e.g. *phrasal verbs, nouns and adjectives*) and other sophisticated lexical constructions (e.g. *collocations, cultural references*). In addition to using basic syntactic structures correctly, interactional strategies that improve interactional skills need to be honed – in particular, deductive skills. Deducing the meaning of words from their use in context is a specific skill that requires constant exposure to medical texts and films in English, as well as a desire to cultivate writing, reading and listening to medical discourse in English and deriving pleasure from this.

### d) *Macroskills*

Within a vocational approach, it is not enough for trainee doctors merely to acquire knowledge of the microstructures and microskills associated with scientific English. Instead, proficiency in the overall skills used vocationally in English-language healthcare contexts is essential for the trainee doctor's future career. In particular, an overall ability to handle situations which require the simultaneous use of various English language and healthcare competences is paramount. This presupposes for example, reflection on the typical interactions between written and spoken modalities in various non-hospital and hospital healthcare and medical contexts. A high level of orality, encouraged by awareness of the conventions and strategies used in healthcare video clips and podcasts, and not just the medical literacy that arises from familiarity with written texts, will enable trainee doctors to “communicate clearly and humanely with patients and their family”, an accomplishment to be fulfilled, under the requirements laid down Italian Ministry responsible for Universities, by the time undergraduates complete their degree course in Medicine.

This general skill requires the trainee student to focus constantly on handling written and spoken forms of communication in English in interactions with healthcare workers (other doctors and healthcare staff such as nurses and paramedics, patients and their families and so on). Medical procedures lay down specific rules and regulations as regards communication, such as written records for the oral interactions of medical teams in emergency settings. The capacity to convert information rapidly from one modality to another goes hand in hand with the need to respect pre-established sequences in the communication of medical information in many healthcare contexts, which may vary from one country to another, for example when patients are handed over between teams. The capacity to recast medical and scientific information in different modalities is the macroskill *par excellence* that trainee doctors must acquire. It is the one which is routinely assessed in examinations that must be taken and passed before working in a hospital in English-language country (OSCE, ACLS Megacode, USMLE and so on).

General communication skills characterize just about all professional walks of life. However, the safety of patients and healthcare workers is a distinctive feature of medical training. Given that written and oral microstructures diverge considerably in English, as compared with many other languages, skills in English in written/oral modalities of medical reporting and a capacity to switch between the two with ease is critically important. In this sense, particular attention will be paid, through exposure to films and written texts, to the historical and cultural development of medicine in English-speaking countries given that a diachronic

perspective provides a suitable basis for understanding the changes that medical thinking and practice have undergone in the course of time. In particular, trainee doctors need to acquire an understanding of those theories, methods and classifications that have been inherited either partially or completely from the past as well as those which have been abandoned entirely. Such a perspective will encourage an understanding of the effects of these changes on the evolution of medical genres, in particular as regards the effects on communication and interaction that have arisen, in the course of time, as a result of scientific and technological evolution. This is why assessment in examinations such as IELTS, TOEFL and OSCE is ineluctable as regards the capacity to recontextualise scientific, medical, clinical and healthcare knowledge and serves as a timely reminder that the unity and connectedness that underlies all the various aspects mentioned above should not be underestimated.

#### **4. 2015/6 Course Syllabuses**

Over the six-year period of study, medical genres and the themes relating to them are constantly revisited. In the first two years (*primo biennio*), the basic steps in vocational training are undertaken. Students will be introduced in the second year to the main features of two levels of analysis of scientific English: microstructure analysis and macrostructure analysis. This will take place with reference to the ability to “face up to and resolve priority healthcare issues responsibly from the following standpoints: prevention, diagnosis, prognosis, therapy and rehabilitation”, all training requirements that MIUR, the Italian Ministry responsible for Universities lays down must be acquired by the future doctor by the end of the six-year period of study.

##### **4.1 Second-Year Syllabus**

The second-year course syllabus for 2015/16 prioritises (a) History of Medical Communication through the ages with particular reference to English-speaking countries; (b) Medical systems of communication: spoken, written and multimodal aspects; (c) Triage Management and Medical Advances in Epidemiology.

##### **Lesson 1: History of Medical Communication: Part 1: Overview from ancient times to the early Victorian period**

*Text: Medical Communication, Chapter 1, with particular reference to Section 1.2: The Medical Timeline: A tool for comparing today with the past; Conclusions (the final chapter).*

##### **Lesson 2: Triage**

*Text: Medical Communication, Chapter 1, with particular reference to Section 1.5: Summary; Chapter 2, with particular reference to Section 2.3: Colour codes in medical emergencies; Chapter 3, with particular reference to Section 3.4. Summary.*

##### **Lesson 3: History of Medical Communication: Part 2: From the late Victorian period to Modern Times with particular reference to John Snow’s work in epidemiology as a turning point in Medical Communication. Viewing of a film on Cholera and John Snow by Mike Jay**

*Texts: (a) Medical Communication, Chapter 1, with particular reference to Section 1.3. Roles and relationships in medical communication and Section 1.4. Change and evolution across time in medical communication; (b) [wellcomecollection.org/mike-jay-john-snow-and-soho-cholera-outbreak-1854](http://wellcomecollection.org/mike-jay-john-snow-and-soho-cholera-outbreak-1854).*

##### **Lesson 4: Emergency Medicine and the *Forward* film**

*The Medical Alphabet, Vol. 1. DVD and Section 2.4. Haematopoiesis.*

**Lesson 5: Part A: Ambulance types and history plus a guided tour of a contemporary American ambulance.**

*Texts: Forward Revisited: Step 2 with particular reference to Inset 3; Take a Tour: Inside an Ambulance: [www.youtube.com/watch?v=xlfDj7GAnNM](http://www.youtube.com/watch?v=xlfDj7GAnNM); Medical Communication, Chapter 3.*

**Part B: Communicating pain: medical reports, skeletal functions and the history of anaesthesia**

*Texts: The Medical Alphabet, Unit 1 with particular reference to Sections 1.3. Anatomy and 1.4. The Skeletal System; Medical Communication, with particular reference to Introduction and Section 1.3. Roles and relationships in medical communication; Scream - the History of Anaesthetics p4 - Chloroform: [www.youtube.com/watch?v=6hBfFeuOuHE](http://www.youtube.com/watch?v=6hBfFeuOuHE).*

**Lesson 6: Part A: Statistical comparisons: describing and quantifying fractions, figures and other numerical data in charts, diagrams, tables and texts (3 hours)**

*Text: The Medical Alphabet, Vol. 1. Appendices.*

**Part B: Emergency Inflight Medicine (3 hours)**

*Texts The Epidemiology of In-Flight Medical Emergencies ([www.youtube.com/watch?v=ZDSm8iZMT9k](http://www.youtube.com/watch?v=ZDSm8iZMT9k))*

**Lesson 7: Grammar Revision: review of microstructures with reference to written and oral exam procedures**

*Text: The Medical Alphabet, Vol. 1. Language Sections, Units 1, 2 and 3.*

## **4.2 Fourth-Year Syllabus**

Lesson Plan

The fourth-year course syllabus for 2015/16 prioritises: (a) Medical Training Systems in English-speaking countries; (b) Disease Awareness and Symbols; (c) Disease Management and Medical Advances in Forensics.

**IV Year: 6 three-hour lessons and 1 six-hour lesson**

**Lesson 1: Anamnesis and Advanced Terminology skills**

**Part A: Definition of Anamnesis: Past, present, occupational and family anamnesis; verb and noun**

**classes in written and spoken English (e.g. to record/a record etc.)**

**Part B: Definition, terminology and analysis of written, spoken and visual medical systems and genres: (a) Handovers; (b) Curbside consultations; (c) Food Pyramids; (d) OSCE stations; (e) Drugs (with particular reference to the following: chewable/effervescent drugs;**

ointments; syrups; drug delivery systems such as inhalers); (f) Wounds and their management: gauzes, plasters, dressings.

*Text: Medical Communication: Systems and Genres, Introduction, Chapter 3, Section 3.3, Conclusions; Medical Alphabet, Vol. 1, Units 4 & 5, Language Sections.*

## **Lesson 2: Colour Codes and Disease Awareness**

*Texts: Medical Communication: Systems and Genres, Chapter 2, with particular to Section 2.0. Introduction and Nancy Shute's article on disease ribbons; The Medical Alphabet, Vol. 1, Unit 4, Section 4.1.*

## **Lesson 3: USMLE exam: mock test from USMLE: genres and symbols.**

*Text: Medical Communication: Systems and Genres, Chapter 3, Sections 3.0 and 3.2.*

## **Lesson 4: Diabetes DMT1/DMT2: Aetiology, Physiology and Pathology of Diabetes**

*Text: The Medical Alphabet, Vol. 1, Unit 4.*

## **Lesson 5: Endocrinology and Anaphylaxis**

### **Part A: Endocrine systems: definitions and focus on the thyroid gland**

*Text: The Medical Alphabet Vol. 1, Unit 5.*

### **Part B: Anaphylaxis: its treatment and management**

*Text: **How to deal with anaphylactic shock 1:** [www.youtube.com/watch?v=PTrIRYs6tio](http://www.youtube.com/watch?v=PTrIRYs6tio)*

## **Lesson 6: Part A: Statistical comparisons: describing and quantifying fractions, figures and other numerical data in charts, diagrams, tables and texts (3 hours)**

*Text: The Medical Alphabet, Vol. 1. Appendices.*

### **Part B: Emergency Inflight Medicine (3 hours)**

*Text: The Epidemiology of In-Flight Medical Emergencies ([www.youtube.com/watch?v=ZDSm8iZMT9k](http://www.youtube.com/watch?v=ZDSm8iZMT9k)).*

## **Lesson 7: Forensics: Historical and Criminal Forensics; Issues in English Forensics (Richard III)**

*Texts: The Medical Alphabet, Vol. 1, Unit 6. Real face of Richard III revealed ([www.youtube.com/watch?v=uUKNB\\_Cdfe0](http://www.youtube.com/watch?v=uUKNB_Cdfe0))*

## **5. Assessment**

Oral and written forms of assessment are designed to evaluate the student's knowledge of English and interactional competence in relation to both micro and macro levels as provided for under Paragraph 3.

Assessment is carried out as follows: formative testing takes place at the end of the second and fourth year of study when students may take a written test which is neither compulsory nor part of the final mark awarded in the sixth year when compulsory summative testing takes place. Students are, nevertheless,

advised to undertake all forms of formative testing offered. In the sixth year, assessment of the student's entire learning over the six year is completed with a written and an oral test and a final mark is awarded that takes into account the student's overall skillset and his or her proficiency as regards the general and specialist skills laid down in the syllabus. Four sessions for the written test will be held in the 2015-16 academic year: **December, February, June, July.**

## **6. Reading List: Prescribed and Recommended Reading Material for 2015/6**

The syllabus highlights the significance of a vocational approach to medical discourse in English, in particular the need for students to explore texts and films in English that exercise their capacity to link up the micro and macro levels of medical and discourse structures and competences. *Medical Alphabet Vol. 1., Appendix VI: GMER Principles* contains a list of the 60 competences that a global doctor needs to acquire. As already pointed out above, acquiring a high level of proficiency of English for the medical and healthcare professions needs to be viewed as an ongoing process for the entire period of undergraduate study. Hence, since not all the themes presented in the reading material can be analysed during lectures, to become global doctors, students should become thoroughly familiar with the *entire* contents of the recommended reading list, in particular in those years when there are no course lectures.

### **6.1. Prescribed Coursebooks**

Anna Loiacono (2012). *MEDICAL COMMUNICATION: Systems and Genres*. Como-Pavia: IBIS.

Anna Loiacono (2012). *THE MEDICAL ALPHABET: An English Text Book in Healthcare. Vol. 1. Andria: Matarrese*. For students in their II or IV year of study in the 2015/6 academic year, the prescribed parts of *The Medical Alphabet* are: UNIT 1: *Acronyms, Abbreviations and Anatomy*; UNIT 2: *Blood*; UNIT 3: *Cardiology*; Appendices I to VI. (For all students)

### **6.2 Reference books**

Students are strongly advised to read the following volume for an overview of Medical discourse.

Anna Loiacono (2016). *FORWARD REVISITED: English-Language texts and films on emergency medicine*. Andria: Matarrese.

Additionally, the following web publications are strongly advised:

*In English:*

AA. VV. (2011) *Teaching medical English. Methods and models*. Bergamo: Polimetrica.

[https://www.academia.edu/10021357/Teaching\\_medical\\_English\\_Methods\\_and\\_models](https://www.academia.edu/10021357/Teaching_medical_English_Methods_and_models)

Anna Loiacono (2015). *The Language of Fear: Pandemics and their Cultural Impact*.

[http://dinamico.unibg.it/cerlis/public/CERLIS\\_SERIES\\_5\\_01\\_Loiacono.pdf](http://dinamico.unibg.it/cerlis/public/CERLIS_SERIES_5_01_Loiacono.pdf)

*In Italian:*

The following papers are by well-known authorities on medical and scientific discourse

Michele A. Cortelazzo *La lingua delle scienze: appunti di un linguista*

[www.provincia.padova.it/comuni/monselice/traduzione/31-33%20pdf/cortelazzo.pdf](http://www.provincia.padova.it/comuni/monselice/traduzione/31-33%20pdf/cortelazzo.pdf)

Luca Serianni. *Un treno di sintomi I medici e le parole: percorsi linguistici nel passato e nel presente*, Garzanti, Milan, 2005

[http://www.treccani.it/lingua\\_italiana/recensioni/recensione\\_02.html](http://www.treccani.it/lingua_italiana/recensioni/recensione_02.html)