The European Council of Optometry and Optics

Final European Diploma in Optometry Benchmark Report

OCULUS Erasmus+ Project

Chitkara University School of Health Science

Optometry

Assessment Panel

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ECOO 2nd Benchmarking activity for OCULUS project.

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The OCULUS Project (**O**ptometry **Cu**rriculum for **L**ifelong learning through Erasm**US**), led by a consortium of educators from optometry schools in Europe, aims to improve and reform existing curricula of optometric education in India and Israel to raise it to a high-standard level using the European Diploma in Optometry as a benchmark.

The Board of Management of the European Diploma were asked to conduct a benchmarking procedure for the OCULUS project, both at the outset of the project, and at the end of the project when knowledge had been exchanged and initiatives implemented to enhance the optometry curriculum in the partner organisations of this project.

The first benchmarking procedure consisted of completion of a self-assessment document and a visit to each institution in 2017 to conduct an in-depth examination of the programmes.

The second benchmarking procedure is a desk-based assessment, chiefly investigating the knowledge/clinical gaps identified from the initial assessment.

Consequently, this report is using the evidence presented in written format from each institution to fulfil the OCULUS project objectives. However, we also recognise that some institutions may be interested in going through the full accreditation process for the European Diploma in Optometry (EDO), and such a process would require a site visit to provide more detailed evidence required for full accreditation.

Key changes identified:

- Some of the instrumentation for the Clinic at the University has been purchased with funds from the OCULUS project though it was not clear precisely what items had been bought with these funds.

- Minimum numbers have been specified for patient contacts in general optometry (GO) clinic (3rd year students examine real patients under supervision). In the contact lenses (CL), and in binocular vision (BV), 3rd year students work with each other, 4th year students examine real patients under supervision. In relation to the CL and BV clinics, it is not clear if real patients are seen in the University's eye clinic or only in hospital settings. For GO, CL and BV clinics, the minimum number of supervised patient encounters is 10. Rubrics apparently have been developed to help the supervising optometrist to evaluate the student's performance.
- A similar approach has been taken with dispensing and low vision. In dispensing, students are posted to optical outlets. Students observe in the second year, work on each other (under supervision) in the third year and work with real patients (again under supervision) in the final year. No minimum number of dispensings is specified. In low vision, students work under supervision on each other and then on real patients, and the minimum number of cases is 5.
- However, the supporting information contains a table listing individual student experience in 4th year internship from July 2019 to Feb 2020, and three (out of 29) have no low vision patients and six have no contact lens patients. So minimum numbers were not achieved in these areas, though it is possible that the internship is not yet complete and that these numbers will in fact be achieved by all students?
- The course team at Chitkara indicate that all labs now have OSCE exams so that 'every clinical competency is tested' and that students cannot pass until they demonstrate proficiency in all clinical competencies. However, this was not presented in evidence.
- The team also indicate that final year students submit a portfolio containing details of the cases they have encountered during their internship and that 20 of these must be presented in the ECOO format.

Outstanding Questions/Issues:

- Reference is made to a 'minimum number of cases' that students should observe or examine, but it is not clear what these minimum numbers are (see earlier comment), and whether they are based on EDO-portfolio recommendations.
- While the team noted that Rubrics have been developed, these are simple spreadsheets listing aspects of a routine/BV eye examination. There are no assessment criteria, indication of marks or weighting, or information as to how this would be used to assess student performance and arrive at a grade. This is not a rubric.

- It is recognised that there have been developments in relation to the internships, however the details provided about the monitoring of student experience during internships are very limited. Are the supervisors during the internships appropriately qualified and trained by Chitkara?
- There is no information about whether the logbook is assessed, and if so how it is assessed.
- Module/unit summaries do not contain any details about how the topic is assessed. This would have been a helpful addition to help understand how the learning objectives of the module are met.
- It would have been helpful to have an overall map of the courses/modules within the programme.
- In hospital settings, it remains unclear whether students use diagnostic drugs and whether they have the opportunity to carry out full eye examinations on the patients referred to the specialty clinics.
- It remains unclear whether students get the opportunity to examine patients who have undergone refractive surgery.
- The response indicates that students attend paediatric and low vision clinics on multiple occasions as 'observers'. Does this mean that they do not get experience of actually conducting at least some of the testing?
- A table is provided indicating the number of patients seen by individual students in the 4th year (B. Optom students presumably) between July, 2019 and February, 2020. The average numbers for refraction are 158, 10 for contact lenses, 14 for binocular vision, ~5.5 for low vision and 15 for cataract 'investigation'. It is not clear whether these numbers meet the intended numbers and whether the numbers only reflect cases where the student was under supervision. Also, while the average numbers are significant, there are several students who have had no (or very low, e.g. 1 or 2 patients) exposure to contact lens, binocular vision or low vision patients.
- In the OSAT tool, there is no indication (most of the time) of how large (by percentage) the learning outcome (LO) topic is within the module assigned for its acquisition. This is a helpful means to indicate how large or small each component is.
- What is the connection between University credits and ECTS? This is not clear or consistent between modules and OSAT.

2nd Benchmarking Opinion against the Knowledge Base and Competencies of the European Diploma in Optometry for Chitkara University

This opinion is based on the Panel's analysis of the documents supplied in response to the initial benchmarking opinion

Colour Coding

Knowledge Base	**Knowledge base** for European Diploma competencies
Clinical/Practical competencies	**Clinical/practical** European Diploma competencies
	Benchmarking Opinion **Satisfactory**
	Benchmarking Opinion **Some weaknesses**
	Benchmarking Opinion **Inadequate**

PART A: Optical Technology

European Diploma Examination Sections	Self-Assessment Document Competency Areas	Provisional Opinion	Comments
Part A 1, Optics 2. Optical Appliances	**Subject 1: Geometrical Optics**		Satisfactory
	Subject 2: Physical Optics		Satisfactory
	Subject 3: Visual Optics		Satisfactory
	Subject 5: Optical Appliances		Satisfactory
	Subject 6: Occupational Optics		Satisfactory
	Subject 5: Optical Appliances		Satisfactory
	Subject 6: Occupational Optics		Response indicates a written exam and viva now takes place. Also there is mention of a visit to a factory and vision screening in a factory. This sounds very good. This remains on amber as the “assessment reference” hyperlink supplied connects only to the Dispensing rubric; no details of the practical exam viva appear to have been supplied.

PART B: Management of Visual Problems

European Diploma Examination Sections	Self-Assessment Document Competency Areas	Provisional Opinion	Comments
Part B 1. Refraction 2. Binocular Vision 3. Contact lenses 4. Visual Perception	**Subject 4: Visual Perception**		The Gap analysis response indicated that the topic of psychophysics (Learning Outcome (LO) 8) would now appear in Ocular physiology module. A curious choice. Visual psychophysics is noted as one aspect of this module in course plan. However, on the OSAT, Learning Outcome (LO) 8 has Binocular Vision II module assigned to it. This does not have visual psychophysics mentioned.
	Subject 7: Vision and Ageing		Pediatric and Geriatric optometry are two modules indicated for the majority of LO's in this subject area. However, both module descriptions lack detail in the distribution of content so it is not possible to determine to what depth these topics are covered. Also, there is no indication of how these are assessed in module description (beyond 'written examination').
	Subject 8: Refraction		All LO's appear to be covered. Previously it was noted that there was lack of anamnesis as a topic; this is now included in Clinical Examination of the Visual System module.
	Subject 9: Low Vision		The module Low Vison Aids is indicated to map to the LO's in this subject area. However, there is no mention of LOs 7 (Eccentric viewing and Steady eye strategy) or LO 8 (Environmental modifications).
	Subject 10: Ocular Motility and Binocular Vision		Satisfactory
	Subject 11: Contact Lenses		Neither LO 12 Orthokeratology nor LO 14, Fitting procedures for Myopia control appear to be covered in the Contact Lens modules.
	Subject 12: Investigative Techniques		This subject area contains several fundamental topics, yet only one module is indicated as covering these learning outcomes. The module description indicates 30 hours of teaching to cover 20 areas, and relevant ECTS percentages show the majority of these only receive a small proportion of credits (apart from automatic objective refraction which appears to have a substantial proportion?). Not satisfied that these LO's are met, and there is a particular lack of reference to LO2 Keratometry, LO3 Retinoscopy and LO6 Pachymetry.

	Subject 13: Paediatric Optometry		Not satisfied that LO2 assessment of visual acuity with particular focus on paediatrics is covered in either module indicated in OSAT. Also LO3 refractive examination is indicated to be covered in Visual Optics I but this is not mentioned.
	Subject 14: Refractive Surgery (B)		Learning outcomes for this are indicated in Ocular Disease II module. This appears to be focused on cataract surgery interventions, without mention of elective refractive surgery.
	Subject 8: Refraction		A simple excel spreadsheet noting the aspects of a routine optometric evaluation (without assessment, marks or weighting criteria) is used as evidence of practical assessment here. LO9 'Ability to communicate bad news to patients' is not assessed as a clinical skill. LO14 'The ability to demonstrate an understanding of the legal, professional and ethical obligations of a registered optometrist' is also not covered. The LO17 'The ability to use appropriate ocular diagnostic drugs to aid refraction' is noted to be covered in internship. However, there is no detail of how this is assessed and whether every student undertakes this. Similarly, it is not clear how LOs 18, 19 and 20 are met for all students.
	Subject 9: Low Vision		The same, simple excel spreadsheet noting the aspects of a routine optometric evaluation (without assessment, marks or weighting criteria) is used as evidence of practical assessment here. This is not evidence that the LOs are met.
	Subject 10: Ocular Motility and Binocular Vision		Another simple spreadsheet listing aspects of a BV examination is used as evidence of practical assessment. This is not sufficient to evidence that these LO's are met or how students demonstrate that they have these skills. Additionally, many of the LO's in this section relating to managing a patient with an incomitant deviation or heterotropia have only a written examination to support, implying that they do not see 'real' BV patients?
	Subject 11: Contact Lenses		Three assessment spreadsheets are available here for RGP, SCL and Toric SCL. However again these are not specific to LO's and again do not contain assessment criteria. The majority of experiences seem limited to students testing each other. LO's 9 and 10 are indicated to be done in clinical internship, but how this is evaluated or whether all students gain similar (minimum) experience is not clear.
	Subject 12: Investigative Techniques		The routine optometric evaluation spreadsheet is used as evidence for assessment of all LO's, but this does not in itself provide evidence of how students meet these LO's or demonstrate they have these skills. For example, the spreadsheet, while mentioning Slit lamp, does not tell us anything about how a student is assessed on 'the ability to detect anterior chamber signs of ocular inflammation'. Also, pupil reactions (LO5) are not mentioned in this spreadsheet.

	Subject 13: Paediatric Optometry		The routine optometric evaluation spreadsheet is used as evidence for assessment of all LO's, but this is not sufficient evidence of, for example, how one adapts history taking with parents of the patient, relative to the approach to taking history in an older child, or adult patient. LO5 'Demonstrate an understanding of techniques for assessment of VA' is a written examination – does this mean students do not see paediatric patients and undertake visual assessment?
	Subject 14: Refractive Surgery		As above, the routine optometric evaluation spreadsheet is used as evidence for assessment of all LO's, but this is not specific to evidence these LO's.

PART C: General Health and Ocular Abnormality

European Diploma Examination Sections	Self-Assessment Document Competency Areas	Provisional Opinion	Comments
Part C 1. Biology 2. Ocular Biology 3. Ocular Abnormality	**Subject 12: Investigative Techniques**		Several of these LO's are covered in Clinics III module, with other modules including Optometric Instruments and Clinical Examination of the Visual system supporting these. However. LO2 Pachymetry is not covered. LO7 gonioscopy is not mentioned in module indicated in OSAT, but is covered in Clinics III module. LO10 Quantitative perimetry: 'Visual field analyser' is mentioned in Clinics III (2hours allocated), but more detail would be helpful here. Indirect ophthalmoscopy is stated in Clinics III module, under Fundus examination topic, as well as some OCT. Not clear whether use of diagnostic drugs is discussed here.
	Subject 14: Refractive Surgery (C)		Again, knowledge appears to be confined to cataract surgery interventions, without mention of elective refractive surgery
	Subject 15: Anatomy and Histology		Satisfactory
	Subject 16: Neuroscience		As before: Seems to cover basic physiology rather than neuroscience.

	Subject 17: General Physiology and Biochemistry		Satisfactory
	Subject 18: Microbiology and Immunology		Satisfactory
	Subject 19: General Pharmacology		One module (Basic and Ocular Pharmacology, equivalent to 1.33 ECTS) is not sufficient cover these LO's.
	Subject 20: Pathology and General Medical disorders		It is difficult to see how these LO's can be covered in sufficient depth through chiefly one module (Systematic Disease). There are some LO's that do not appear to be satisfactorily covered, e.g. tumours in Paediatric optometry?
	Subject 21: Epidemiology and Biostatistics		Satisfactory
	Subject 22: Ocular Anatomy and Physiology		Satisfactory
	Subject 23: Ocular Pharmacology		One module (Basic and Ocular Pharmacology, equivalent to 1.33 ECTS) is not sufficient cover these LO's. It is not explicit that cycloplegic and mydriatic drugs and the clinical optometric usage of these are covered.
	Subject 24: Abnormal Ocular Conditions		Ocular Disease I and II modules are much more comprehensive, and now cover all LO's
	Subject 12: Investigative Techniques		The routine optometric evaluation spreadsheet is used as evidence for assessment of all LO's, but this is not evidence of how students meet these LO's or how they demonstrate they have these skills. Furthermore, LO1 colour vision and LO5 Pupil reactions are not mentioned on this spreadsheet. LO8 refers to only direct ophthalmoscopy, and there is no mention of used of mydriatics to aid fundus examination (LO6, and also relevant to LO10). Also, there is no mention of LO12 'The ability to asses and interpret Visual fields'.
	Subject 24: Abnormal Ocular Conditions		The routine optometric evaluation spreadsheet is used as evidence for assessment of all LO's, but this is not evidence of how students meet these LO's or how they demonstrate they have these skills. This does not give assurance that any of the LOs have been met.