



The European Council of Optometry and Optics

Accreditation of the Department of Optometry

**Bachelor of Health Care (Optometry) programme at the University
of Applied Sciences, Metropolia, Helsinki, Finland**

**Against the Knowledge Base, Competencies
and Portfolio of the
ECOO European Diploma in Optometry**

14-15th November, 2022

1. Background

Interest in the Accreditation for the European Diploma of Optometry (EDO) was initiated by the course team for the Bachelor of Health Care (Optometry) at Metropolia University of Applied Sciences in 2016. A visit took place in November 2017, the conclusion from which was that the programme met the requirements for partial accreditation against the standard for the EDO. Full details of the accreditation process for the European Diploma of Optometry by the Accreditation Agency are available [here](#).

There are approximately 1,500 optometrists in Finland. In 2011, legislation was introduced which permitted the use of diagnostic drugs by optometrists: mydriatics, cycloplegics and anaesthetics. The first graduates with full diagnostic rights were in 2015. Those qualifying before that date are required to undertake a pharmacology course, and ~70% of all optometrists have done this. Eye care is mainly delivered privately, though some optometrists work in eye departments in public hospitals. Finnish optometrists are allowed to examine children (i.e. there is no minimum age from which optometrists can examine children), and to use cycloplegics. However, in relation to the optometric examination and management of children, cycloplegics and issuing spectacle prescriptions are limited only to children aged 8 years and above. Optometrists are not permitted to make referrals to hospitals. However, direct referral is possible to a private ophthalmologist by giving the patient a written standard sheet "Optometrist's ocular assessment with specified findings".

Optometrists need to undertake continuing education for registration (mandated by the optometry ethical committee) and gain 30 points (based on 1 hour lecture = 1 credit point) over a five-year period.

The Finnish Association of Vision and Eyecare (NÄEry) forms a national umbrella association that gathers the vast majority of the Finnish private eye care providers, optic retailers, institutions, and organizations underneath it.

There are currently two universities providing optometric training in Finland: Oulu University of Applied Sciences and Metropolia University of Applied Sciences in Helsinki. Both departments, together with the Finnish Association of Vision and Eyecare, requested that the courses should be accredited against the European Diploma in Optometry together to promote a common standard of eyecare to the public. These developments also coincide with planned reform of healthcare funding, which has the potential to change the nature of the delivery of eye care in Finland. The Visitors recognise the importance of the two optometry programmes supplying optometrists to meet the eyecare needs of the Finnish population, and the importance of further development of scope of practice.

Metropolia is Finland's largest University of Applied Sciences. It offers education in the fields of Business, Culture, Health Care and Social Services and Technology. Metropolia has around 16,200 students, spread across four campuses. The University runs 43 Bachelor's degree programmes (6 in English) and 28 Master's degree programmes (8 in English). The first optometry degree course ran in 1996. The programme at Metropolia is taught in Finnish. The optometry programme runs at the Myllypuro campus. This is a new facility (opened 2020).

The Optometry programme sits within the University's School of Rehabilitation and Examination which is led by Dr Pekka Anttila and which contains Bachelors degree programmes in Biomedical Laboratory Science, Oral Hygiene, Osteopathy, Physiotherapy, Podiatry, Prosthetics and Orthotics, Radiography and Radiotherapy as well as Optometry. There are four Masters programmes in the School. There is currently no Masters course in optometry at Metropolia. As a university of applied science, the Ministry of Education does not allow the award of PhDs.

The course started in 1966 and the qualification is nationally accredited. The Degree Programme Co-Ordinator is Saija Flinkkilä, who is assisted by Satu Autio and Dr Pia Mäkelä. Satu is responsible of the development of the syllabus and Pia was also heavily involved in the preparation for this accreditation.

The Visitor Panel consisted of:
Prof Brendan Barrett (Chair of Panel)
Dr Julie-Anne Little
Prof José Manuel Méijome
Dr Sonja Zinken

2. Overarching analysis of the programme

There are 16 permanent staff in the Department of Optometry of whom 10 have an optometric qualification. They are supported by 11 clinical and visiting staff who input to the programme. The total FTE for work hours related to optometry and Metropolia permanent staff at the end of 2022 was 8.7. The Degree Programme Co-Ordinator is Saija Flinkkilä, and Saija is assisted by Satu Autio.

Entry to the course is competitive with some students taking a nationwide examination whilst other students present their grades from high-school. There are two entries a year (August/September and January) at Metropolia, each of around 25

students. The overwhelming majority (75-80%) of those who start the programme graduate within 4 years. Education costs in Finland are funded by the government and controlled by the Ministry of Education and the Ministry of Social Affairs and Health. The 3.5-year programme consists of 210 ECTs.

The structure of the programme that has been running with the first intake in 2019 is shown below in this schematic supplied by the course team:

Code	Name	ECTS	1	2	3	4	5	6	7
SXE19S1	Optometry	210							
SXE19S1-1001	Introduction to Optometry	30	30						
SX00DR95	Introduction to Studying	5	5						
SX00DR97	Spectacle application and manufacturing:	10	10						
SX00DR98	General Anatomy and Physiology	5	5						
SX00DS18	Geometrical Optics	5	5						
SX00DR99	Dispensing in Optometric Practice	5	5						
SXE19S1-1002	Ocular Optics and Ametropias	30	30						
SX00DS00	Optics of the Eye and the Spectacles:	10	10						
SX00DS01	Basics of the Eye Examination	5	5						
SX00DS02	Ocular Anatomy and Physiology, Clinical Microbiology and Investigative Techniques	10	10						
SX00DS03	Refraction	5	5						
SXE19S1-1003	Functions of the Visual System	30			30				
SX00DS04	Binocular Vision	10			10				
SX00DS05	Visual Perception	5			5				
SX00DS06	Visual Ergonomics and Swedish Language Skill	5			5				
SX00DS07	Orthoptics and Work Placement	10			10				
SXE19S1-1007	Pathology, Pharmacology and Contact Lens Fitting	30				30			
SX00DS08	Pathology and Pharmacology	10				10			
SX00DS09	Methods for Research and Development	5				5			
SX00DS10	Contact Lens Fitting and Work Placement:	15				15			
SXE19S1-1005	Ocular Health and Eye Diseases	30					30		
XX00BH18	Innovation Project	10					10		
SX00DS11	Abnormal Ocular Condition and Refractive Surgery	15					15		
SX00BU40	Planning of the Bachelor's Thesis	5					5		
SXE19S1-1006	Special Topics in Optometry and Entrepreneurship	30						30	
SX00DS12	Pediatric Eye Diseases and Vision	5						5	
SX00DS13	Low Vision Patient and Elderly People	5						5	
SX00DS14	Work Placement in Optometric Practice	10						10	
SX00BU39	Entrepreneurship in Welfare, Leadership and Service Production	5						5	
SX00BU42	Implementing the Bachelor's Thesis	5						5	
SXE19S1-1004	Optometrist as a Health Care Professional	20							20
SX00DS15	Optometrist as a Health Care Professional and the Work Placement:	15							15
SX00BU43	Reporting and Publication of the Bachelor's Thesis	5							5
SXE19S1-1009	Elective Studies	10							10
		210							

With regard to facilities, the department uses shared lecture rooms for didactic teaching. They have twelve clinical cubicles for optometric practicals and for examination of patients. These are well equipped with slit lamps and keratometers, trial cases, digital vision charts, including some video slit lamps and phoropters.

There was a range of low vision equipment. Students across all years use these facilities for all types of optometric clinical experience and skills building. The use of diagnostic drugs is taught for dilation and cycloplegic refraction, and Goldmann tonometry undertaken. A separate room is equipped with an OCT, fundus camera, visual field screener and a range of other clinical equipment. It is in this room where contact lens fitting is taught.

The Metropolia University of Applied Sciences' "HyMy-Village" is a multidisciplinary learning and development environment at the Myllypuro campus. In HyMy-Village, optometry patients are served at the clinic of the 'Optometry Sight Center' and the 'VillageOPTICIAN' store, whose entrance is adjacent to the reception area where other patients attend (<https://www.metropolia.fi/en/services/well-being-and-health-village/optometry-services>). In the optometry facilities, patients are examined by optometry students, who are supervised by experienced clinicians. The VillageOPTICIAN store is a licenced facility for the provision of optometric eyecare and it contains a dispensing/reception area, a single testing room and glazing facilities. This facility plays an important part in the clinical experience gained by students on the programme. A full-time optometrist manages the service and supervises students rotating through this facility, which has an average of 6 patients per day.

There is a dispensing laboratory with a large number of hand and automatic edgers, where students get considerable practical experience. The students get practical experience in glazing single-vision lenses, in assembling and in repairing spectacles. They also learn ophthalmic dispensing fitting techniques.

The panel observed lectures and practicals during the visit. Lecture material is supplied ahead of time via e-learning platform Moodle. Lectures are not recorded. Lecture attendance is not compulsory, and attendance was high for the lectures observed. For the practical sessions, students are split into smaller groups and have set tasks and worksheets to complete. In some of the practical sessions we observed, students in later years of the course were acting as supervisors for the students in earlier years in practical sessions. This arrangement is overseen by a member of staff. This peer teaching seems to work very well and represents an innovative approach which we find commendable.

During the visit, the Visitors met with a sample of students from 1st/2nd/3rd/4th years of the Bachelors programme. There was a mixed profile of backgrounds, with many currently working part-time in optometric practice. Many of the students we met had not come straight from school, but instead had been in the workplace for a period of time before applying to join the programme. Some had had a different career before starting the optometry course. The views expressed by students about the teaching on the course and the support from staff were positive. Students were aware of the

European Diploma in Optometry with students in the latter years most knowledgeable.

There is a tutor system to support students with both academic and personal problems. Tutors meet individually with students. There does not appear to be a staff/student committee.

During the visit, the panel met with a large number of the staff who teach on the programme, both in a scheduled meeting and in our observation of the various practical/clinical sessions that were running during our visit. The Visitor panel noted the recent addition of new staff, including Mira Järvinen, Tanja Lehti and the change from part-time to full-time status for Päivi Nokipii.

Students start seeing patients at Metropolia's internal clinics for eight days during year 3 (periods 1 or 2). In these sessions, students refract patients and dispense spectacles with the support of a qualified clinician. The minimum requirements for these clinics are as follows: they observe one examination conducted by a student colleague in a later stage of the programme and perform one eye examination with a binocular vision assessment. They glaze one pair of spectacles, dispense one pair of spectacles, and carry out spectacle adjustments or repairs on three patients. They also take three IOP measurements using a non-contact tonometer. Students also take part in one multidisciplinary consultation meeting, where students of other disciplines present a patient case for evaluation of optometric problem solving.

Year 3 (period 3) students continue at the VillageOPTICIAN for five days as part of their work placement. They carry out comprehensive eye examinations with diagnostic drugs when appropriate, contact lens fittings and contact lens aftercares for real patients. Year 3 (period 4) and year 4 (period 1) students practise at the Optometry Sight Center final year specialist clinics. In these clinics, more complicated cases from VillageOPTICIAN are referred to this specialist 3-hour clinic, and these are mostly glaucoma, low vision and occupational cases. Students see a minimum of five patients. The patients in these Optometry Sight Center final-year, specialist clinics are invited for examination, rather than presenting themselves for examination as happens in the VillageOPTICIAN. In the Optometry Sight Center, the student works one to one with the patient and two supervisors are available per six patients. All results are recorded to PROMEDA patient recording system.

The students undertake a total of five external work-based placements (clinical rotations) during their Bachelors degree programme: one week in semester 2 (year 1), three weeks in semesters 3 and 4 (year 2), and five weeks in semesters 6 (year 3) and 7 (year 4). The students organise the external placement opportunities, including the hospital placement, themselves. These placements are integral parts of various modules in the programme, for example the first placement in year 1 is a requirement of the module *SX00DS00 Optics of the Eye and the Spectacles*. For

each work-based placement, there is a checklist of experiences and patient numbers that students need to gain during these externships. For example, the 5-week placement at the end of year 3, consists of one week at the VillageOPTICIAN store plus 4 weeks at external work placement in an optometric practice. As part of this placement, students are required to complete 20 comprehensive eye examinations (that includes eye health assessment, with diagnostic drugs if appropriate), 5 contact lens fittings and one detailed case report of a contact lens fitting for the Portfolio. For the final external placement (year 4), students have 4 weeks of work placement in an optometric practice and 1 week in a hospital eye department.

The supervisors for the external placements need to have prescribing rights for diagnostic drugs and they must have proper equipment in optometric practice, including a slit lamp biomicroscope and a Volk lens for fundus examination. The students indicated that the level of equipment differs markedly between practices, though all have a tonometer and the means to allow fundus biomicroscopy. Only some have perimeters and often these are not used. Hospital training can be done in public or private hospitals. The aim is to get acquainted with the work of an ophthalmologist and optician at the hospital and see patients with various eye diseases. Students write a learning diary about their days in hospital.

Students indicated that there is variation between students in the nature and extent of practical experience gained during placement. The use of dilation was uncommon, and visual field assessment was not carried out. In the meeting with 4th year students, they indicated that some students had little exposure to retinal disease whilst on hospital placement. This could arise if the hospital placement consisted of, for example, more paediatric focussed experience. Whilst still enormously valuable, students indicated that, in the case of some hospital placements, they would value greater variation in activity across the period of the placement.

The visitors met with work-based placement supervisors/employers, some of whom held MSc qualifications and professional development responsibilities in their companies. They were all satisfied with the level of knowledge of the students coming into practice, though some noted that more hands-on experience of ocular disease and real patients would have been valuable in training.

Students appear to rely on work-based placements to gain experience of paediatric vision assessment where usually only one child under 12 will be examined. There are demonstrations of simulated low vision in the programme and exposure to the use of low vision aids and electronic devices, but again low vision practical experience appears to be gained through student's work-based placements or possibly hospital experience. Where students do not get practical experience in particular clinical cases/conditions (e.g. examination of patients with an incomitant deviation), the course team ask the student to prepare a case report in which they describe how such a patient should be examined.

With regard to dispensing experience, the students clinical experience in practice in the 1st and 2nd year of the programme ensures that they have good experience of spectacle dispensing of a range of cases including progressive lenses, and for vocational purposes. All the students are required to write one case report for the portfolio, where they have themselves examined and dispensed protective lenses. If there was no such patient available to examine, they still had to dispense such lenses and write a case about that. Assessment for this dispensing report is pass/fail and in the case of the latter, they have to redo it.

The structure of the programme across three years builds on knowledge of human anatomy, physiology and pathology, optics and contact lenses. They develop clinical skills in refraction and investigative techniques and later knowledge of ocular disease, binocular vision, low vision and paediatrics.

Prior to the visit, there were some difficulties in mapping the self-assessment document with the information provided. During the visit, the Visitor panel had opportunity to talk to the course team, were given additional information requested, and had access to Moodle. Through these efforts, the panel were able to view in detail the content and assessment for modules and to gain a good understanding of how the programme is delivered.

Areas for Improvement

- There is a need to increase the exposure of students on the programme to *actual* cases of ocular pathology and systemic disease where there is ocular involvement. This could be achieved via a number of means, including by identifying cases of pathology in patients attending the VillageOPTICIAN and through 'grand rounds' formats, where patients with known pathology are invited to attend and where students rotate through the available patients, not conducting full eye examination but being exposed to the key features that each patient presents with. The examination of, or exposure to, other patients with known conditions could also be increased through links with clinical/visiting staff, for example by inviting children with eye and visual disorders and their parents to the Metropolia clinics. Other possibilities include establishing links with Low Vision and Glaucoma patient associations (or charities) and inviting patients in these categories to the clinics at Metropolia; alternatively, Metropolia students could visit willing individuals in small groups in their preferred location. Visits to refractive surgery clinics would also offer valuable learning opportunities for students. Videos also have a role to play but wherever possible exposure to actual patients should take place. In preparation for later portfolio requirements, students should keep a record of

these clinical experiences and these should be inspected and monitored by staff at Metropolia.

- The quality of hospital experience students gain is variable. It would be important for students to acquire a similar level of experience across a range of conditions, e.g. paediatrics, binocular vision issues, specialist CL, AMD, glaucoma, cataract. We recognise the challenges associated with this, but the course team could gather information on the experiences of current students to track the suitability of different hospitals with the aim of better directing students to locations offering better experiences in subsequent years. Alumni who have started careers in hospital settings are already very helpful in this regard. The record of the cases seen during hospital visit (suitably anonymised) should be examined by the course team, with the aim of learning about the extent to which experience gained may differ from one student to another.
- The course team need to ensure that all students have experience of low vision assessment and eye examination on paediatric patients, also exposure to special populations (i.e. patients with learning and other disabilities). This is important in regards to developing the communication skills that are needed to interact effectively with these patients in the clinical setting.
- Certain areas of the programme have ECTS totals significantly less than the suggested ECTS in the EDO. While the ECTS suggested by EDO are a guide only, the teaching of general pathology and systemic disease provide important foundation and look as if they could attract more weighting in your programme. We would like the course team to continue to develop the curriculum, taking into account the potential changes in scope of practice that may result from healthcare reform in Finland. The balance in the curriculum may also need revision in light of new clinical guidelines which are expected and taking advice from your advisory committee.
- Visual fields assessment seems like it doesn't get as much prominence in clinical assessments of patients, and there is a need to ensure this is more routinely used in Metropolia.
- We suggest that Course team examine ways to greater embed research and the principles of evidence-based practice into student learning, especially in their write-up of clinical cases and in the Portfolio. The module Methods for Research & Development provides a strong foundation for embedding research/EBP into clinical practice by the students but the Panel did not get a strong sense that this was actually happening.
- There is a need to establish a plan for Portfolio assessment including; clear assessment structure to ensure portfolios meet the standard of the EDO,

plagiarism check, final sign off, and a means to check the veracity of the 130 cases. There is a need to engage to a greater extent with students in preparation of their portfolios, signposting when to start, how to embed the research methods/EBP learning in their write up of cases, and encouraging reflective practice.

3. Summary analysis of the self-assessment document

Part A

A number of modules, chiefly in years 1 and 2 of the Bachelors programme, support the subject areas and learning outcomes for Part A with sufficient depth. Practical competencies are achieved through successful completion of assessments.

Decision: Standard Met

Part B

A range of modules, across years 1, 2 and 3 of the BSc Optometry programme support the subject areas and learning outcomes for Part B. These include modules on clinical investigative techniques, paediatric optometry, binocular vision, visual perception, abnormal ocular conditions, contact lenses and low vision.

The evidence that every student achieves all of the clinical competencies needs to be strengthened. More hands-on clinical experience under supervised conditions by the course team will be vital to achieve this, alongside improved QA procedures to develop the learning experience in the placements, and a robust assessment method in place for Portfolios of clinical experience.

Decision: Standard Met Subject to Fulfilment of Conditions 1-3 [conditions listed below]

Part C

A range of modules, chiefly across years 1 and 2 of the programme, support the subject areas and learning outcomes for Part C. These include general and ocular anatomy and physiology, microbiology and pathology and general medical disorders, general and ocular pharmacology. The course team should continue to scrutinise the programme and ECTs weightings to ensure sufficient depth of content levels are achieved.

As above, the evidence that every student achieves all of the clinical competencies needs to be strengthened. More hands-on clinical experience under supervised conditions by the course team will be vital to achieve this, alongside improved QA

procedures to develop the learning experience in the placements, and a robust assessment method in place for Portfolios of clinical experience.

Decision: Standard Met Subject to Fulfilment of Conditions 1-3 [conditions listed below]

Part D

Learning outcomes for professional conduct and communication are delivered in year 1 to a sufficient level. Increasing the amount of clinical experience under supervised conditions in university clinics on a variety of patients will strengthen these skills. As part of tracking and recording clinical experience, enhanced feedback mechanisms will be needed to develop a culture of feedback and reflection so that students are aware of strengths, weakness and areas for growth.

Decision: Standard Met Subject to Fulfilment of Conditions 1-3 [conditions listed below]

4. Analysis of the Clinical Portfolio

Students had been given clear instructions regarding the detailed case types required for the Portfolio, and that they had received a template for completion of eye examination. A number of the 4th year students indicated that they wished they had made an earlier start on their portfolios.

In preparing the detailed cases for the Portfolio, it was apparent that there had been iterative support and feedback for students to guide them on the required structure or level of detail required. Students present their cases to their colleagues in a formal teaching setting in which they receive feedback from their peers and from the session leader.

Since the current 4th year students are the first to undertake the new programme of study and they are yet to complete the programme, the Visitors only had the opportunity to review the Portfolio submitted by only one student who had submitted their 20 detailed cases ahead of the submission deadline which is now imminent. We are grateful to the course team for translating this document in order to have allowed us to interpret this document. This portfolio was completed to a high standard, though there was not much evidence of the inclusion of relevant clinical research literature. Also, the portfolio appeared to contain more in the way of evaluation and less than expected reflection on the part of the student. There were some examples of fundus, OCT, topography and anterior/ocular adnexa eye images supporting the

case records, but these could have been more frequently apparent. Only one case included visual field plots.

At the time of the visit, the course team did not seem to have decided upon the mechanism to be used for assessing the Portfolios and we would encourage the plans to be developed as soon as possible. These plans will need to include details of the processes the course team will use to assess the Portfolios, the establishment of pass and fail criteria and details about how the veracity of the 130 non-detailed cases could, if needed, be established. When the remaining portfolios are submitted, the Visitors will request to receive a sample to gain an understanding of the overall quality of the Portfolios and of their assessment.

Decision: Decision deferred until we see a more representative sample of portfolios submitted, and the detailed plans of the course team for Portfolio assessment

5. Conclusions

The EDO standard for Part A is met and the standard for Parts B, C & D are also met subject to fulfilment of Conditions 1-3 [see below]. In relation to the Portfolios, our decision is deferred until we see a sample of portfolios submitted, and the detailed plans of the course team for Portfolio assessment.

The Visitors would like to thank Saija Flinkkilä, Satu Autio and Dr Pia Mäkelä, the course team and the whole Department for their accommodation and organisation of the Accreditation visit. We recognise the dedicated efforts required to prepare for and undertake accreditation for the EDO.

The Visitors recognise the new facilities and the other improvements to this programme since the 2017 visit when *Partial Accreditation* was the decision of the Visiting Panel. During the recent visit, we were also pleased to hear very good feedback from employers on the quality and commitment of students on work-based placements and to hear positive comments from students and graduates of the programme.

Based upon our observations, below we list three **conditions** that would need to be met in order for *Full Accreditation* to be achieved. The course team should also pay careful attention to the other areas for improvement noted in the narrative above.

Should these conditions be met, we would conclude that Full Accreditation is granted for a period of 5 years.

Conditions

1. Establish a system for portfolio assessment including clear assessment structure to ensure portfolios meet the standard of the EDO (including reflection, literature and referencing) through the assessment of 20 detailed cases, and a means for checking veracity of the 130 cases.
2. Increase practical exposure to ocular pathology cases in clinical settings so that all students receive a minimum level consistent with achieving the practical competencies of the EDO.
3. Continue to develop your curriculum, taking into account the upcoming healthcare reform in Finland, and the establishment of national clinical guidelines, taking advice from your advisory committee.

In relation to the student cohorts who will qualify for the EDO, our recommendation to the EQB will be that students who are about to graduate (December, 2022) can achieve the EDO provided that Condition 1 is met. This will require the course team to provide samples of the EDO portfolio to the Accreditation Panel and for the assessment of these portfolios to be deemed to be satisfactory. In order for the subsequent cohort (students graduating in summer, 2023) to be eligible for the EDO, we will recommend to EQB that these students can achieve the EDO provided that both Conditions 1 and 2 are met. In future accreditation visits and in annual monitoring returns, we will expect to see progress against Condition 3. Given the tight timelines outlined above, please provide a description of how you plan to satisfy Conditions 1 & 2 as soon as possible, when you have had a chance to consider your plans in relation to the areas identified.