



The European Council of Optometry and Optics

Re-Accreditation of the Division of Eye and Vision's

Bachelors in Optometry & Masters in Clinical Optometry
programmes at the Karolinska Institute, Sweden

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

17-18th October, 2022

1. Background

The Division of Eye and Vision at the Karolinska Institute, Sweden was one of the first institutions to seek accreditation of its optometry teaching provision against ECOO's European Diploma in Optometry, and the Institute achieved full accreditation in 2016.

To meet the requirements of the European Diploma, candidates must complete both the BSc programme in Optometry and the Masters programme in Clinical Optometry and only graduates of both programmes at KI can be considered for the European Diploma in Optometry (EDO) via the existing accreditation. In addition to the academic qualifications, candidates for the EDO are required to complete and submit a Portfolio of Clinical Experience for the EDO. This includes documentation of the 150 cases, 20 of which are presented as detailed case studies. For the MSc Optometry qualification at KI, students complete a similar portfolio evidencing their clinical experience, but they only need to submit 7 detailed cases in their KI portfolio. These are in the same format as required for the EDO Portfolio. Currently, graduates from the Masters programme have three months following completion of their Masters programme to submit their portfolio for the EDO. In the recent past, no students from KI have completed the EDO portfolio and thus no students from KI have been eligible for the EDO. The possible reasons for this are discussed later in this document.

The timing of this re-accreditation visit was delayed by COVID-19. There were significant disruptions to delivery of education and restrictions on work and travel throughout 2020 and 2021. In response to this, the European Qualifications Board for ECOO extended the accreditation period until such time as a face-to-face visit could be conducted. Accordingly, this visit was scheduled for spring 2022. Initially, the visit was scheduled for May but following a request from KI to delay to the autumn, the visit was arranged for October, 2022. Prior to the re-accreditation visit, documentation was received from the course team, coordinated by Professor Rune Brautaset.

The Optometry programme at KI is one of two optometry programmes in Sweden. As well as KI, Linnaeus University, Kalmar, offers a 3-year bachelor degree in optometry and a Masters programme that is run on a part-time basis over 4 years. Optometric education in Sweden is fully funded by the Swedish government. The number of places available at KI to study optometry is restricted by KI, which in turn agrees an overall student number with the Government.

There is a national association, the Swedish Association of Optometrists. Optometry in Sweden is a primary care profession, with optometrists also working in private ophthalmology clinics and hospitals, and in public hospitals. There are approximately

1900 optometrists in Sweden (of whom 1600 are members of the Association) and graduates are in demand with high employability rates. The Association inputs into the content of the courses at KI via KI's Programme Committee and Prof Brautaset is the current President of the Swedish Association. KI also gathers information from the profession in Sweden via biannual meetings with senior representatives of the major companies, and via surveys that are sent to employers.

Optometry in Sweden is set at Level 3b of the World Council of Optometry Scope of Practice, with the right to use diagnostic drugs to deliver eyecare, provided additional training beyond the level of BSc has been undertaken.

A licence to practise is required to work as an 'Optiker' in Sweden. The term Optiker is the only legally recognised term in Sweden. At the present time, continual professional development (CPD) is not mandatory for any healthcare profession. However, there is a tradition of optometrists in Sweden being voluntarily listed on the Association's webpages where CPD credits are listed for each member. Credits are only listed for courses, seminars etc. approved by the Swedish Association and the list is open to the public. Furthermore, the Association lists optometrists who are 'specialists' in different areas of practice (e.g. in binocular vision). The Swedish Association decides who is eligible to be on specialty lists, and sets the requirements to join and to stay (e.g. through periodic update) on each list.

The Visitor Panel consisted of:

Brendan Barrett

Bob Chappell

Pedro Monteiro

2. Overarching analysis of the KI programmes

The head of the Division of Eye and Vision is Prof Rune Brautaset. The programme director is Dr Marika Wahlberg and the assistant programme director is Dr Maria Nilsson.

There are 20 individuals within the Division who contribute to the teaching and administration of the BSc and MSc Optometry programmes. Of these, around 15 are full-time and 5 are part-time. In addition, there are staff associated with the programmes who teach on an hourly basis.

Student numbers are approximately 50 per year in the BSc programme and 25 in the MSc programme. For the BSc programme the number of applicants is around 150

(i.e. 3 times the number of places). Typically around 85 students are offered a place on the BSc programme but only 65 actually start the course. Within a few weeks of starting, normally 5 to 10 students leave the course and by the end of the programme (at the end of the third year), normally around 50 students graduate with a BSc. The dropout rate is much smaller in the MSc programme. Students do not pay for their optometric education, instead this is funded by the Swedish government.

Since the last ECOO accreditation visit in 2016, the Division of Eye and Vision has moved to a new location. The Division now has ~650 square-metres for pre-clinical and clinical training at the Eye Centre of Excellence. Lecture halls for optometry students are available on the main KI campus which is located around 5 minutes away from the Eye Centre of Excellence. The clinical space runs as an optical practice where members of KI or of the general public can book an appointment and be fitted with glasses or contact lenses if needed. Low vision aids are also provided, mainly in connection with low vision clinics. The clinic contains 17 fully-equipped examination rooms each of which contains modern equipment for refraction, as well as a slit-lamp for the assessment of ocular health. In addition, there are 4 rooms containing equipment for further investigative techniques, e.g. OCT devices, fundus cameras, anterior segment topographers and visual field equipment. The staff-student supervision ratio for these clinics is 1:3/4 and diagnostic drugs are used as needed.

In the pre-clinical rooms there is modern refraction equipment in one room where students work in pairs and in a neighbouring room there is a large volume of equipment pertaining to modern optometric practice (e.g. focimeters and other equipment for dispensing, Optos, perimeters etc.). These rooms are used for teaching and when not in use for teaching, some are available for students to practice, including during evenings and weekends. The volume of space within the Division appears appropriate for the delivery of the course, and the quality and range of clinical equipment shown to the Visitors was impressive and of the appropriate standard to deliver the required outcomes.

The Eye Centre of Excellence contains not only the Division of Eye and Vision but it also houses the St. Erik Eye Hospital as well as other private eye clinics, e.g. private practices offering refractive surgery.

One of the major strengths of the BSc & MSc programmes at KI stems from the close proximity to the St. Erik Eye Hospital. One of the part-time Optometry staff at KI also works as an ophthalmologist at the hospital. This affords excellent learning opportunities for students working in pairs (typically with one student in an earlier and one in a later year of the course together in a pair) to conduct the initial examination of the patient. The students are supported and directed by members of the optometry staff who have experience in hospital-based optometry but the overall

responsibility for the patients rests with the ophthalmologist. Diagnostic drugs and Goldmann tonometry are routinely used in these clinics.

As well as gaining experience in the examination of real patients with active pathology, this clinical set-up features afternoon sessions where discussion takes place between the students, optometric supervisors and the ophthalmologist about the patients who had been seen and treated earlier in the day. The students learn from one another, from their optometry supervisors and from the ophthalmologist. It is an enormously powerful learning environment in which to learn about diagnosis and management of ocular disease and the Visitors were very impressed. The team at KI have estimated that across both programmes, each student would have been the main examiner for ~58 patients in this joint clinic with the Eye Hospital, and co-examiner for the same number of patients.

In the KI optometry clinic, each student is estimated to examine at least 36 patients as main examiner and a further 36 as co-examiner for primary care examination. The equivalent figures for contact lens patients in the KI clinic are at least 13 (main) and a further 13 as co-examiner. All of these patients are seen within the BSc programme only. More patients are seen during the external placement, including during the external placement that is frequently taken by students as an elective course.

The students undertake four weeks of placement (divided into several placements rather than in one block) in a private optometry practice during their BSc to supplement the experience they gain in the KUM clinic (joint clinic with St. Erik hospital). Students are encouraged to undertake their placement in a practice this is different from where they may already be in employment, and to go to different practices for different external placements.

The study programmes in Optometry at KI are divided into the 3-year BSc programme after which graduates can obtain their licence from the Ministry of Health & Welfare. This licence allows the practice of optometry and the fitting of contact lenses. Hence the contact lenses modules are contained solely within the BSc programme. The one-year MSc course is an optional degree for those who want to obtain the right to use diagnostic drugs. Both programmes are full-time. The Division at KI also offers a commissioned education which leads to the right to use diagnostic drugs. This consists of 45 ECTS of material but does not lead to a degree. The course content matches that of the MSc except that it does not include the MSc thesis.

During the visit, the Visitors met with a sample of students from the 1st/2nd/3rd of the BSc programme and from the 4th year (MSc). Most students work part-time in optometric practice. Student feedback was largely positive regarding the course teaching and feedback on assessments and progress. Students were also positive

about the support they receive from staff. There was limited knowledge amongst the students of the European Diploma in optometry.

The Visitors also met with recent graduates of the programme (BSc and MSc) and with employers of recent graduates. It was clear from these discussions that there is a wide range of responsibilities and working environments in which graduates are working, ranging from a scope of practice at a high level (e.g. in specialist settings) to optometric practice that does not require the high-level skills and competences developed during the training at KI.

In Sweden, children can be examined at any age. Optometrists are allowed to prescribe contact lenses for children at any age but glasses can only be prescribed from the age of 8 years of age. Within the programs, arrangements are made to see of children at day-care centres where vision-screening type assessments are conducted.

In relation to low vision, students see at least two low-vision patients at KUM and also spend time in groups at state run low vision clinics.

With regard to dispensing experience, the Division recognises that students will not receive the clinical experience that is required for the EDO within the BSc programme. Hence, any student who wishes to aim for the EDO, will need to gain the additional experience required for the 5 detailed dispensing cases for the EDO portfolio and this can be provided as part of the MSc course. During the external placement, students gain experience of spectacle dispensing a range of cases including progressive lenses. There is practical workshop experience in the first year of the BSc programme, which includes fitting and manipulation of frames and lenses. Further experience, including protective eyewear is gained from the comprehensive internal dispensing 'shop'.

Information provided prior to the visit was insufficient to accurately map the self-assessment document. However, during the visit, the Visitor panel had opportunities to talk to key module leads from the course team, and were given the additional information they requested, including access to University e-learning platform, Canvas. Through these efforts, the Visitor panel were able to view in detail the required content and assessment for modules and gain the required understanding of how the programme is delivered and the assurances that learning outcomes and practical competencies are achieved.

3. Analysis of the self-assessment document

Part A

A number of modules, chiefly in years 1 and 2 of the BSc Optometry programme, support the subject areas and learning outcomes for Part A with sufficient depth. During the visit, we had access to Canvas (KI's VLE platform) and the course team were able to show where all of the learning outcomes are covered in the course. Clinical/practical competencies are achieved through successful completion of assessments and evidence of clinical experience in this area is recorded in student portfolios.

Decision: Standard Met

Part B

A large range of modules, across the BSc programme (years 1-3) and the MSc programme support the subject areas and learning outcomes for Part B with sufficient depth, which was verified by adding information included in the University e-learning platform. These include modules for the knowledge base on visual perception (S4), vision and aging (S7), refraction (S8), ocular motility and binocular vision (S10), contact lenses (S11), paediatric optometry (S13), refractive surgery (S14) and clinical investigative techniques (S12B).

Practical competencies for Part B are assessed in the various internal clinics at KI and clinical experience is gained in the various internal clinics at KI, and via the optometry rotations (externships).

Decision: Standard Met

Part C

A large range of modules, across the BSc programme (years 1-3) and the MSc programme support the subject areas and learning outcomes for Part C with sufficient depth. These include general and ocular anatomy & physiology, human biology, pharmacology and pathology, investigative techniques and clinical practice, and ocular pathology.

Practical competencies are achieved through a range of modules that are part of the BSc (e.g. Advanced Optometry 1,2 & 3) and MSc (e.g. ocular pharmacology & diagnostics) programmes. Clinical experience is gained in the various internal clinics at KI, and via the optometry rotations (externships). The association with the nearby St. Erik hospital is particularly suitable to the provision of in-house experience of a range of ocular pathologies.

Decision: Standard Met

Part D

Learning outcomes for professional conduct and communication are delivered across a very broad range of modules, starting in the earliest stages of the BSc course. The development and assessment of practical competencies takes is achieved in internal KI clinics in the BSc programme. Clinical experience is further developed in externships that take place throughout the BSc programme, with a heavier concentration towards the end of the programme.

Decision: Standard Met

4. Analysis of the Clinical Portfolio

The Panel were provided with a sample of portfolios in advance of the visit but these are from several years ago because there haven't been any recent KI candidates for the EDO. During the visit, the Panel was given access to a sample of records which students are required to submit as part of their MSc portfolio at KI. These are prepared in the format that would be suitable for inclusion in an EDO portfolio. All seven of 7 cases submitted are graded and the student needs to achieve a pass grade for each in order to pass the course. After final submission, there is no further feedback to the students. From the records we saw, the level of detail was consistent with the level which would be required for the EDO portfolio, although the images/photos were not visible to us as these were stored in a different location.

The course team outlined the support that they give to students preparing their KI portfolios cases and how the students support one another by giving feedback on earlier versions of the case write-ups. All of this is consistent with a suitable framework should, in the future, KI graduates again submit EDO portfolios.

The internal KI portfolio contains 7 detailed cases compared to the 20 required for the EDO, but this is a difference in scale only. In addition, the assessment of the portfolios by KI did not appear inconsistent with the assessment that we would expect to see as part of the EDO portfolio assessment. Hence, we are left with the impression that what is currently happening at KI in terms of the portfolio is similar to what would be expected for the EDO portfolio, except in relation to the number of detailed cases (7 versus 20) and the overall volume of cases the portfolio needed for the EDO (150).

Given that the Panel have not had the opportunity to review recent portfolios prepared by KI students for the EDO, should EDO portfolios be submitted by KI students in the future, the Panel will wish to review both the portfolios (or a sample of them in the event that many are submitted) and the assessment of these portfolios.

Decision: Standard Not Currently Met; Pending Review of Future EDO Portfolios and of their Assessment by KI personnel

5. Conclusions

Part A: *Standard Met*

Part B: *Standard Met*

Part C: *Standard Met*

Part D: *Standard Met*

Portfolio: *Standard Not Currently Met; Pending Review of Future EDO Portfolios and their Assessment*

The Visitors thank Prof Rune Brautaset, Dr Maria Nilsson, Dr Marika Wahlberg and the entire team in the Division of Eye and Vision at KI for the welcome and co-operation we received during the re-accreditation visit. The Visitors recognise that the BSc and MSc are strong programmes, which embed significant clinical experience. In addition to many excellent features of the BSc and MSc programmes, the students benefit enormously from having access to ocular pathology patients via the adjacent eye hospital. As well as considerable exposure to eye disease, this arrangement provides valuable opportunities for inter-professional teamwork and learning.

The decision of the Panel is that graduates of the BSc and MSc programmes at KI who complete the EDO portfolio should be eligible to receive the EDO. At the present time, no students who complete the BSc and MSc at KI are submitting an EDO portfolio. The reasons for this may be complex but one possible contributory factor is that graduates of the MSc programme currently have only 3 months after MSc graduation before they must submit their EDO portfolio. This apparent misunderstanding was over when the clock for submission of the EDO portfolio starts and finishes. In discussion with the core team at KI, the team have indicated that the time allowed could be extended from the current 3 months, up to 2 years after entering the MSc program. This is consistent with ECOO guidance which says the 150 cases can be collected over two years.

In conclusion, the view of the Visitor Panel is that the re-accreditation of the combined BSc & MSc Optometry programmes at KI is successful, and that accreditation is granted for another 5 years, subject to one condition. Since there have been no recent EDO portfolio submissions, the Panel would like to have oversight of any future EDO portfolio submissions; specifically, we would wish to see

the submitted portfolios (or a sample thereof) and to have oversight of KI's assessment of these portfolios.

This decision will be passed to the ECOO European Qualifications Board for formal ratification.