

**JOHANNESBURG OFFICE
EXAMINATIONS & CREDENTIALS****June 2026****THE COLLEGE OF PHYSICIANS OF SOUTH AFRICA****R E G U L A T I O N S****FOR ADMISSION TO THE EXAMINATION FOR THE
POST-SPECIALISATION****SUB-SPECIALTY CERTIFICATE****IN****ENDOCRINOLOGY AND METABOLISM****Cert Endocrinology and Metabolism (SA) Phys****1.0 OBJECTIVES**

The specialist training programme in Endocrinology and Metabolism provides the trainee with the opportunities and the means to acquire the knowledge, skills and attitudes necessary to undertake comprehensive medical practice in this speciality, unsupervised and independently and/or within a team.

2.0 ENTRY REQUIREMENTS

Applicants must have completed training as a Specialist in Internal Medicine. South African entrées should have completed training in the Fellowship of The College of Physicians – FCP(SA) and registration with the HPCSA as a specialist physician. International trainees must provide evidence of similar training and registration as a specialist in Internal Medicine in their home country.

3.0 DURATION AND ORGANISATION OF TRAINING

- 3.1 Training must take place in an HPCSA accredited training institution with an HPCSA Endocrinology Training Number being allocated for the duration of training. Training is currently time-based – a minimum of 2 years full-time training is required.
- 3.2 Part-time training in endocrinology is acceptable in a recognised training unit that is HPCSA approved. The part-time training programme must be approved by the HPCSA *prior* to the commencement of training and an HPCSA Training number allocated. The duration of training must be equivalent to a total full-time training period of 2-years with a maximum being 50% part time (i.e a 4-year training programme). Potential candidates must prepare a time schedule on application for approval by the local training institution and at a combined University HoD meeting. Part-time trainees must keep a weekly record of the training activities attended (e.g. clinics, academic meetings, ward rounds, testing, etc.) and the duration of these activities (e.g. clinic 5 hours, in-patient care 2 hours, testing 2 hours etc.); this should be signed off by the supervising consultant on a weekly or monthly basis to ensure and provide evidence that the apportioned percentage of training time has indeed been fulfilled. All the other rules and regulations to sit for the examinations must be met by part time trainees.
- 3.3 As per HPCSA regulations, training outside of an accredited training site may take place for up to 3 months (provided the trainee remains in an accredited training post under the auspices of the university) in order to meet specific training objectives that may not be available at the home institution or even other accredited training institutions.

4.0 VALIDITY OF TRAINING

- 4.1 Training is valid for a period of three (3) years from the date of completion in a numbered sub-speciality training post.
- 4.2 In exceptional circumstances candidates who do not successfully complete the examination within this period may motivate, with support from their HOD, to the College of Physicians for a once off extension.
- 4.3 Candidates wishing to sit for the examinations thereafter will have to submit proof of additional training and a letter of support from the HOD of the training institution for consideration by the College Council.

5.0 ADMISSION TO THE EXAMINATION

The following are the requirements for admission to the examination:

- 5.1 certification of having completed at least eighteen months (full-time equivalent if part-time training) as a subspecialty trainee in accredited specialist department(s) / division(s) / unit(s) of Endocrinology and Metabolism, registered and approved by the Health Professions Council of South Africa.
- 5.2 submission of the prescribed portfolio, to the Head of the Training Division
- 5.3 a written report/written report from the head/s of the specialist department(s) / division(s) / unit(s) of Endocrinology in which training was completed, certifying that the candidate has fulfilled all the requirements as listed here and is ready to sit for the written examination.

6.0 AWARDING OF THE CERTIFICATE

- 6.1 The certificate will be awarded to those candidates who have both successfully completed the written examination and completed their required training time and portfolio.
- 6.2 Upon award of the Certificate, the trainee may apply to the Health Professions Council of South Africa for sub-specialty registration.

7. FORMAT AND CONDUCT OF THE EXAMINATION

- 7.1 The examination will be in digital written format and will consist of two papers. The papers will be of 15 Questions of 8 marks each. Papers will examine the full breadth of the curriculum – a blueprint is provided in Appendix E.
- 7.2 There will be no clinical or oral examination.

8.0 PASSING THE EXAMINATION

The two papers will count towards a single mark. The pass standard will be set at 50% . (This standard may be subject to explicit change in future after ongoing psychometric review of the papers.)

9.0 SYLLABUS AND TRAINING

See Appendix A

10.0 ONGOING IN-SERVICE EVALUATION OF THE ENDOCRINOLOGY TRAINEE

See Appendix B

11.0 CURRICULUM FOR THE SUB-SPECIALTY ENDOCRINOLOGY AND METABOLISM

See Appendix C

12.0 CLINICAL CASE AND TOPIC PRESENTATIONS

See Appendix D

13.0 BLUEPRINT FOR THE WRITTEN EXAMINATION

See appendix E

APPENDIX A

1. SYLLABUS AND TRAINING

A broad experience in general (internal) medicine is considered essential for the practice of endocrinology and metabolism. The portfolio book should be used to log all patient contacts during training.

1.1 The management of outpatients and inpatients:

- 1.1.1 Attendance at specialist clinics is obligatory. To ensure that outpatient training is implemented effectively an optimal number of new (n=1-2) and follow-up (n=6-8) patients will be seen at each clinic under supervision and review. Sufficient patients with common and rarer endocrine and metabolic disorders must be seen to provide adequate personal experience. Attendance at general and sub-specialty outpatient clinics are ideal, including attendance at reproductive endocrinology clinics, adolescent endocrine clinics, gestational diabetes clinics, etc.
- 1.1.2 A portfolio must be kept to record the number of the various out-patient clinics the trainee has attended.
- 1.1.3 The management of inpatients must also be supervised and reviewed. A Portfolio must be kept to record inpatients for whom the trainee has assumed responsibility. (Patients with very rare conditions, seen and discussed, should be added separately)
- 1.1.4 A portfolio record of all dynamic tests performed by the trainee must be kept
- 1.1.5 Contact with other departments relevant to endocrinology, such as chemical pathology, histopathology, neurosurgery and surgery (endocrine), radiology, and nuclear medicine is essential
- 1.1.6 Attendance and observation at surgery (e.g. adrenal surgery, pituitary surgery, parathyroid surgery) for patients under the trainee's care is essential and should be logged in the portfolio.

1.2 Academic meetings, conference attendance and rotation to other centres:

- 1.2.1 Active participation at official ward rounds and organised academic activities such as journal club, research meetings and seminars is mandatory
- 1.2.2 Active participation at scientific meetings (local and international) is encouraged
- 1.2.3 Rotation to other research centres (local and international) for a specific purpose and time period is encouraged, if possible. By HPCSA rules, up to 3 months may be spent outside the accredited training site, provided the candidate remains in the accredited post under the control of a university with a Faculty of Health Sciences or Medical School.

1.4 Curriculum and competence (See Appendix A for content of the curriculum):

It is expected that completion of the curriculum will result in demonstrable competence at consultant level in the following areas:

- 1.4.1 Knowledge of Endocrine and Metabolic Disorders. This will require a thorough theoretical knowledge of the endocrine and metabolic diseases. It will include knowledge of the epidemiology, aetiology, pathogenesis, pathology, clinical features and management of these diseases
- 1.4.2 Clinical contact with the patient. This will require the trainee to be able to take a history and perform a clinical examination of a patient with an endocrine or metabolic disorder to include special details and methods outlined in the training record
- 1.4.3 Demonstrate experience of endocrine and metabolic disease through the age spectrum. It is envisaged that this experience could be obtained over the two years by contact with appropriate patients and by attendance at Endocrinology clinics or specific courses
- 1.4.4 Endocrinological and Metabolic emergencies. Gain experience with the endocrinological and metabolic emergencies as shown in the full curriculum (Appendix A)
- 1.4.5 Selection of appropriate laboratory tests. This will require knowledge of the metabolic changes, and changes that accompany endocrine or metabolic disease
- 1.4.6 Knowledge of the place of imaging techniques and ultrasonography and other in the investigation of endocrine disease. This will require knowledge of the place of these investigations in the diagnosis, and in following the progression of disease
- 1.4.7 Understand the pharmacology of drugs used in the endocrine and metabolic diseases. This will require knowledge of the drugs used in the management of endocrine disorders as well as knowledge of hormone replacement therapy
- 1.4.8 Appreciate the role of patient education and staff management in endocrine and metabolic diseases and working as part of a multi-disciplinary team. This will require knowledge of the wide field of patient education required in the endocrine and metabolic disorders and the concept of the team approach to patient management.

- 1.4.9 Special Skills
- Performance and interpretation of dynamic endocrine tests. The trainee will be required to demonstrate competence in performing dynamic tests of endocrine function and be able to interpret the results of these tests. A record of all dynamic tests performed by the trainee in their portfolio.
- 1.4.10 Teaching experience. The trainee should be able to demonstrate the ability to teach medical and paramedical staff by experience and specific courses if necessary
- 1.4.11 Develop research experience and knowledge of critical appraisal skills and evidence-based medicine. This will include training in the analysis of data and an understanding of the principles and practice of clinical research, and the interpretation and contextualisation of published studies. Completion of a research project in clinical or basic science is encouraged, with publication in a peer-reviewed journal or presentation of research project at a scientific meeting ideal.
- 1.4.12 Endocrine/Metabolic Laboratory Investigation. Knowledge of the methodology of common biochemical assays and the interpretation of results is essential.
- a. **General Principles**
 - The radioimmuno-assay
 - The radioreceptor-assay
 - ELISA assays
 - Molecular endocrinology: DNA extraction, PCR amplification, SSCP, DNA sequencing
 - b. **Measurement**
 - Peptide hormones
 - Steroid hormones
 - Important substrates (glucose, lipids)
 - Other (eg HbA1c)
 - c. **Dynamic tests.** Knowledge of the common dynamic tests used in endocrinology is required. Practical experience is essential and must be documented in the portfolio book. Competence in the performance and interpretation of the following tests is required:
 - ACTH stimulation test
 - HCG stimulation test
 - Glucose tolerance for diabetes and acromegaly
 - Glucagon stimulation tests
 - Dexamethasone suppression tests
 - Sodium loading test for primary hyperaldosteronism
 - Posture / Captopril test for primary hyperaldosteronism
 - Water deprivation test
 - Prolonged fasting for hypoglycaemic disorders

1.5 Recommended Reading:

1.5.1 Books:

- a. It is recommended that trainees should read a modern but relatively short and manageable textbook of Endocrinology in the first 3-6 months of training (eg. Greenspan and Baxter: Basic and Clinical Endocrinology; Lavin: Manual of Endocrinology and Metabolism – updated every 2-3 years).
- b. Modern reference textbooks on Endocrinology, Metabolism and Diabetes should be readily available (eg. de Groot: Endocrinology; Williams Textbook of Endocrinology, Oxford Textbook of Endocrinology).

1.5.2 Journals:

A range of general medical and endocrinology and diabetes journals are essential reading. Some suggested journals include:

- a. Journal of Clinical Endocrinology and Metabolism
- b. Endocrine Reviews
- c. Clinical Endocrinology
- d. The Lancet Diabetes and Endocrinology
- e. Diabetes Care
- f. Diabetic Medicine
- g. Diabetologia
- h. European Journal of Endocrinology
- i. New England Journal of Medicine
- j. Lancet

APPENDIX B**1.0 ONGOING IN-SERVICE EVALUATION OF THE ENDOCRINOLOGY TRAINEE**

Up-to-date **training records and a portfolio** of achievements will be maintained by the trainee throughout. The training records will be countersigned by the trainers to confirm the satisfactory fulfilment of the required training experience and the acquisition of competencies as set out in the curriculum. It will remain the property of the trainee and must be produced at the annual assessment time and when entering for the written examinations. And will consist of the following:

- 1.1 Assessment of the portfolio kept by the candidate recording the details of all patients seen and the clinics attended, specific endocrine testing performed, procedures seen or performed, academic meetings attended, etc.
- 1.2 Details of research undertaken and manuscripts accepted or submitted for publication in the field of endocrinology and metabolism
- 1.3 Regular in-house clinical case-assessments.
- 1.4 Six-monthly assessment of competence by the Head of the Endocrinology and Metabolism Training Unit.
- 1.5 Exit examination under the auspices of the CMSA consisting of a written paper.

APPENDIX C

CURRICULUM FOR THE SUB-SPECIALTY ENDOCRINOLOGY AND METABOLISM

1. The pathophysiology of the endocrine system

- 1.1 Classes of hormones
- 1.2 Mechanism of action of hormones
- 1.3 Regulation of hormone systems
- 1.4 Pathology in disease

2. Diabetes Mellitus

- 2.1 Diagnosis, classification and management of diabetes
 - 2.2.1 Type 1 diabetes
 - 2.2.2 Type 2 diabetes
 - 2.2.3 Other specific diabetes subtypes
- 2.3 Diabetic emergencies
 - 2.3.1 Diabetic ketoacidosis
 - 2.3.2 Hyperosmolar hyperglycaemic state
 - 2.3.3 Hypoglycaemia
- 2.4 Diabetes during acute illness or surgery
- 2.5 Pre-diabetes
- 2.6 Conception and pregnancy in diabetes; gestational diabetes
- 2.7 Diabetes in young people and transition to adult services; diabetes in the elderly
- 2.8 Complications of diabetes
 - 2.8.1 Screening for the complications of diabetes
 - 2.8.2 Cardiovascular macrovascular complication
 - 2.8.3 Eye disease
 - 2.8.4 Renal disease and hypertension
 - 2.8.5 Neuropathy and erectile dysfunction
 - 2.8.6 Autonomic neurological complications
 - 2.8.7 Foot disease
 - 2.8.8 Lipid disease
 - 2.8.9 Hypoglycaemia unawareness
- 2.9 Nutrition and metabolic support of diabetes
- 2.10 Diabetes technology – continuous glucose monitoring, insulin pumps
- 2.11 Diabetes and fasting
- 2.10 Diabetes and driving

3. Thyroid

- 3.1 Thyrotoxicosis
- 3.2 Hypothyroidism
- 3.3 Thyroid emergencies
- 3.4 Thyroiditis
- 3.5 Nodular thyroid disease and thyroid neoplasms
- 3.6 Inherited thyroid disease
- 3.7 Non-thyroidal illness syndrome
- 3.8 Disorders of iodine-deficiency
- 3.9 Thyroid disease in pregnancy; HCG-mediated hyperthyroidism

4. Hypothalamic and pituitary disease

- 4.1 Hyperfunction of the pituitary gland
 - 4.1.1 Prolactinoma
 - 4.1.2 Acromegaly
 - 4.1.3 Cushing's disease
 - 4.1.4 Glycoprotein-secreting adenomas

- 4.2 Hypopituitarism
 - 4.2.1 Genetic and acquired dysfunction of hypothalamus, anterior and posterior pituitary
- 4.3 Pituitary tumours
 - 4.3.1 Incidentalomas
 - 4.3.2 Non-functioning pituitary tumours
 - 4.3.3 Pituitary apoplexy
 - 4.3.4 Craniopharyngiomas, perisellar cysts
 - 4.3.5 Empty sella syndrome
 - 4.3.6 Infiltrative pituitary disorders
 - 4.3.7 Non-pituitary sellar masses
- 4.4 Indications and complications of pituitary surgery
- 4.5 Indications and complications of radiotherapy
- 4.6 Pituitary disorders during pregnancy

5. Adrenal

- 5.1 Primary adrenal insufficiency
 - 5.1.1 Addison's disease, mineralocorticoid deficiency, other causes
- 5.2 Adrenocortical hyperfunction
 - 5.2.1 Primary hyperaldosteronism, other causes of aldosteronism, Cushing's syndrome
- 5.3 Congenital adrenal hyperplasia
- 5.4 Adrenal tumours
 - 5.4.1 Adrenal incidentaloma, hyperplasia, adenoma, carcinoma
 - 5.4.2 Pheochromocytoma and paraganglioma
- 5.5 Pharmacological use of glucocorticoids

6. Reproductive endocrinology

- 6.1 Hypogonadotrophic hypogonadism
 - 6.1.1 Inherited, acquired
- 6.2 Growth and development
- 6.3 Puberty
 - 6.3.1 Delayed, precocious puberty
- 6.4 Hyperandrogenism
- 6.5 Polycystic ovary syndrome
- 6.6 Hormonal contraception
- 6.7 Menopause
 - 6.7.1 Premature ovarian failure
 - 6.7.2 Ovarian hyperthecosis
- 6.8 Ovarian tumours
- 6.9 Testicular dysfunction
- 6.10 Testicular tumours
- 6.11 Erectile dysfunction
- 6.12 Hormone replacement therapy in women and men
- 6.13 Gynaecomastia
- 6.14 Infertility
- 6.15 Disorders of sexual development
- 6.16 Gender dysphoria

7. Parathyroid glands, calcium disorders and bone

- 7.1 Hyperparathyroidism
 - 7.1.1. Primary, secondary and tertiary hyperparathyroidism
 - 7.1.2 FHH
- 7.2 Hypoparathyroidism
- 7.3 Vitamin D deficiency and resistance
- 7.4 PTH-independent hypercalcaemia
- 7.5 Hypocalcaemia

- 7.6 Osteoporosis
 - 7.6.1 Postmenopausal osteoporosis
 - 7.6.2 Osteoporosis in men
 - 7.6.3 Secondary osteoporosis
- 7.7 Measurement of bone mass, bone turnover and fracture risk assessment
- 7.8 Bone and mineral disorders
 - 7.8.1 Hypophosphataemia
 - 7.8.2 Rickets and Osteomalacia
 - 7.8.3 Paget's disease of bone and other sclerosing conditions
 - 7.8.4 Inherited disorders of the skeleton (Skeletal dysplasia such as osteogenesis imperfecta, fibrous dysplasia)

8. Other metabolic disorders

8.1 Disorders of appetite and weight

- 8.1.1 Obesity
 - 8.1.1.1 Diet, psychobehavioural and medical approach
 - 8.1.1.2 Bariatric surgery
 - 8.1.1.2.1 Physiologic and metabolic effects
 - 8.1.1.2.2 Complications
- 8.2 Anorexia nervosa and bulimia

8.3 Lipid disorders

- 8.3.1 Advanced lipoprotein testing
- 8.3.2 Genetic lipid disorders
- 8.3.3 Disorders of high-density lipoprotein cholesterol
- 8.3.4 Atherogenic dyslipidaemia
- 8.3.5 Lipodystrophy syndromes
- 8.3.6 Lipid disorders in patients with HIV

8.4 Spontaneous hypoglycaemia

- 8.4.1 Insulinoma
- 8.4.2 Other syndromes

8.5 Electrolytes and fluid balance

- 8.5.1 Hyponatraemia and hypernatraemia
- 8.5.2 Polydipsia
- 8.5.3 Hypokalaemia, hyperkalaemia
- 8.5.4 Hypomagnesaemia

9. Neuroendocrine tumours

- 9.1 Functional tumours
 - 9.1.1 Insulinoma
 - 9.1.2 Gastrinoma
 - 9.1.3 Glucagonoma
 - 9.1.4 Ectopic ACTH syndrome
 - 9.1.5 Carcinoid syndrome
- 9.2 Non-functional neuroendocrine tumours

10. Integrative endocrinology

- 10.1 Drugs and the endocrine system
 - 10.1.1 Treatment-induced endocrine dysfunction
 - 10.1.1.1 Interferon, Lithium, Check-point inhibitors, TK inhibitors, amiodarone
 - 10.1.2 Hormone abuse
 - 10.1.3 Testosterone and anabolic steroids
 - 10.1.4 Peptide hormones
 - 10.1.5 Endocrine disrupting chemicals

- 10.2 Endocrinology and malignancy
 - 10.2.1 Metastatic and humoral complications of cancer
 - 10.2.2 Endocrine responsive tumours (breast, prostate, reproductive system, thyroid)
 - 10.2.3 Late endocrine effects of cancer
 - 10.2.4 Inherited endocrine tumour syndromes
- 10.3 Autoimmune polyglandular syndromes
- 10.4 Hormonal changes with ageing and systemic disease
- 10.5 Endocrine disorders secondary to infectious disease, including HIV
- 10.6 Endocrine manifestations of systemic disease

11. Diagnostic techniques in endocrinology – indications, interpretation, pitfalls

- 1.1 Assessment of hormones and pitfalls of laboratory testing
 - 1.1.1 RIA
 - 1.1.2 ELISA
 - 1.1.3 LC-MS/MS
 - 1.1.4 Point-of-care testing
- 1.2 Dynamic endocrine function testing
- 1.3 Conventional Imaging
 - 1.3.1 Ultrasound
 - 1.3.1.1 Thyroid including fine needle aspiration and cytology
 - 1.3.1.2 Pancreatic endoscopic ultrasound
 - 1.3.1.3 Ovarian and testicular
 - 1.3.2 CT
 - 1.3.3 MRI
- 1.4 Functional Imaging
 - 1.4.1 Technetium, Iodine scintigraphy
 - 1.4.2 Technetium Sestamibi scintigraphy, SPECT/CT
 - 1.4.3 MIBG scintigraphy
 - 1.4.4 Somatostatin receptor scintigraphy
 - 1.4.5 PET, PET/CT and PET/MRI
 - 1.4.5.1 ^{18}F -FDG
 - 1.4.5.2 ^{68}Ga -DOTATATE
 - 1.4.5.3 ^{11}C -methionine/ ^{18}F -choline
 - 1.4.6 Bone scintigraphy
- 1.5 Angiographic techniques and localisation with venous sampling
 - 1.5.1 Bilateral inferior petrosal sinus sampling for ACTH
 - 1.5.2 Bilateral adrenal venous sampling for aldosterone
 - 1.5.3 Intra-arterial calcium stimulation with hepatic venous sampling for functioning insulinomas and gastrinomas
 - 1.5.4 Parathyroid venous sampling

APPENDIX D.**CLINICAL CASE AND TOPIC PRESENTATIONS**

1. Trainees will present 12 over the training period i.e. 6 per year, if training for 2 years and 4 per year if training for 3 years, etc. They will also present a minimum of 10 topic presentations (seminars) over the course of their training period. The seminars will be included in the portfolio
2. These case reports can be on any clinical aspect of endocrinology but the trainee is encouraged to include a range of cases consistent with the diversity of the approved curriculum.
3. Each case report must be presented as a Power Point presentation of approximately 20 minutes duration and must discuss the case in the depth and clarity expected from a specialist in internal medicine. It should include the details around the relevant basic science where appropriate. The presentation will be followed by a 10-minute oral assessment (using the standardised marksheet) by consultant/s within the division. (Refer to attached marksheet). These cases will form the trainee's portfolio
4. The supervisor will oversee that the trainee has completed the required number of case reports and that the case reports represent a sufficiently diverse spectrum of endocrine disorders.

INTERNAL CASE-PRESENTATION ASSESSMENT

Certificate in Endocrinology & Metabolism - Case Presentation Assessment		
NAME:	DIAGNOSIS:	DATE:
<u>Clinical Assessment (10)</u> - Succinct summary - Appropriate differential diagnosis		
<u>History and Examination (10)</u> - Important past medical history, family history, chronic medication - Important history supporting diagnosis - Important clinical findings supporting the diagnosis		
<u>Investigations (20)</u> - Appropriate and cost-effective investigations - Correct interpretation of tests		
<u>Management (40)</u> - Appropriate management plan - Explanation for why each drug/procedure is used or modified if necessary - Long-term plan- management/follow-up - Other therapeutic options including potentially useful novel therapies		
<u>Complications (10)</u> - Explanation for complications that occurred OR - Understanding of potential complications		
<u>Understanding of relevant basic science (10)</u>		
<u>Additional remarks</u> (If a candidate scores less than 50% please provide a detailed explanation below)		
Examiner 1 Signature _____ Examiner 2 Signature _____		

APPENDIX E

BLUEPRINT FOR THE WRITEN EXAMINATION

TOPIC	% of exam	No Questions	Total marks
Diabetes mellitus	23	7	56
Thyroid	17	5	40
Hypothalamus and pituitary	10	3	24
Adrenal	10	3	24
Reproductive endocrinology	10	3	24
Parathyroid/Calcium/ Bones	17	4	32
Other metabolic endocrinology (nutrition, obesity, lipids, electrolytes)	10	3	24
Other	7	2	16
TOTAL	100	30	240

- Questions will all be based on clinical case scenarios.
- Every Question will be out of total of 8 marks.
- Every Questions will have a minimum of 3 subquestions
- The maximum mark per subquestion is 4.
- 25% of the overall paper will be testing applied basic science.