1. **Statement of Purpose**

The endocrine system is essential in maintaining and regulating vital functions of the body. It operates primarily by a feedback mechanism that functions inter-dependently with other systems to maintain homeostasis. Endocrine disorders are difficult to diagnose because of the multiplicity of non-descriptive symptoms associated with glandular dysfunction. Nursing assessment needs to be sensitive to the variety of clinical manifestations that may be present. This module presents conditions that occur throughout the lifespan that require nursing intervention in this area.

2. **Terminology**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>HBGM</td>
<td>home blood glucose monitoring</td>
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<td>Glycosylated Hemoglobin A</td>
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<td>ADH (antidiuretic hormone)</td>
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<td>Hypoglycemia</td>
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<td>Hyperglycemia</td>
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<td>Diabetes Insipidus</td>
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<td>Exophthalmos</td>
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<td>Goiter</td>
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<td>Food Exchange Lists</td>
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<td>Ketostix</td>
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<td>Dextrostrip</td>
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<td>Diabetic Retinopathy</td>
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<td>Diabetic Neuropathy</td>
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<td>Diabetic Glomerulopathy</td>
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<td>Tetany</td>
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3. **Classroom Objectives**

3.1

a. Review the functions and hormones secreted by each of the endocrine glands.

b. Identify the diagnostic tests used to determine alterations in function of the endocrine glands.

***c. Outline the teaching needs of patients requiring hormone and steroid therapy.
d. Discuss the interrelatedness of the endocrine system and the nervous system as they control homeostasis.
e. Identify common health care problems encountered when alterations in endocrine function occur.
f. Discuss pharmacological and nursing implications of hormonal and steroid therapy.
g. Differentiate between insulin-dependent and non-insulin dependent diabetes.
h. Distinguish among the types of insulins by source, purity, concentration, formulation, and time of activity.
i. Describe the relationship between diet, insulin, and exercise, for persons with diabetes.
j. Discuss hypoglycemia, diabetic ketoacidosis, and hyperosmolar hyperglycemic nonketotic coma.

*** k. Discuss the pathophysiology of diabetes.

*** Not required of the VN student.

3.2 Learning Activities
a. Review anatomy and physiology (Endocrine System)
b. Know terminology.
c. Review VN 112, Module D.
d. Discuss, in class, each of the endocrine glands, their identifying functions, secretions, and alterations resulting from dysfunction.

*** e. Develop a teaching plan for a newly diagnosed insulin-dependent diabetic which includes self administration of insulin, dietary planning, exercise regimen, personal hygiene, and sick-day guides.
f. Explain, in class, the acute and chronic complications of diabetic mellitus and the relationship between diabetic control and prevention of complications.

*** g. Investigate community services that are provided for the detection and prevention of diabetes and the education of persons who have the diabetes.
h. Develop a one-week meal plan for a diabetic patient, using the ADA Exchange Lists.
i. Discuss, in class, the nursing care, medical/surgical treatment modalities used for pituitary, thyroid, adrenal, parathyroid, and pancreatic endocrine dysfunction. Review audio-visual materials on the endocrine system.
j. Read current articles as assigned by instructor.
k. Complete assigned computer programs.

3.3 References
a. Current textbooks
b. Review Growth & Development chapters
c. Anatomy & Physiology text.

4. Clinical Objectives

***
 a. Develop and implement a nursing care plan, including a teaching plan, for a newly diagnosed diabetic patient.
b. Discuss social, financial and cultural aspects of the patient with diabetes.
c. Administer, when possible, insulin on a sliding scale basis to a diabetic requiring intensive therapy.
d. Prepare an assigned patient for diagnostic scanning; observe procedure when possible.
e. Obtain fractional urine, perform clinitests and acetests correctly, and record results on patient's record.
f. Obtain a 24-hour urine, when ordered, for 17-hydrocorticosteroids and 17-ketosteroids.
g. Assess assigned patients for indications of endocrine dysfunction.
h. Perform glucometer testing on a diabetic patient.

*** Not required of the VN student

5. Skills Laboratory Requirements

 a. Review preparing and administering regular, NPH, and Lente insulin.
b. Review collecting fractional and 24-hour urine specimens.
***
c. Continue intravenous therapy requirements.
d. Glucometer testing.

References

 a. Current required texts

*** The VN student is responsible for I.V. procedures previously identified.