The following are some suggestions as to topics to spend time studying. This list or any list like it cannot be expected to cover each and every topic possible for the upcoming exam. However, it should give you a reasonable idea as to the breadth of material. My suggestion is to use this list as a way to help you organize your notes and your reading. "***" indicates material not covered in lecture that you need to read independently in your text or from the website.

Chapter 1

Louis Pasteur’s discoveries
general aspects of endocrinology as a science (traditional and modern)
behavioral neuroendocrinology
historical timeline of the development of endocrinology
How do hormones function?
homeostasis
feedback loops & examples
Berthold’s classic work
What is a capon?
Berthold’s three hypotheses and significance to development of endocrinology as a science
eunuchs - physiology and roles in society
stages of endocrine research using behavior
relationship of nervous system and endocrine system to influence behavior
the “sports fans” study
classes of research into hormone behavior interactions
the 14 different research methodologies outlined for the study of endocrinology
the “leptin” study
feedback loops

Chapter 2

methods for hormone delivery & communication
endocrine and exocrine cells
endocytosis and exocytosis in cells
the traditional endocrine glands
methods of stimulating endocrine gland activity
steroidal vs non-steroidal hormones
second messengers - role and function
the hypothalamus as a brain region and as an endocrine gland
methods of hormone delivery
the pituitary gland.... structure & function & hormone production and function
thyroid gland....structure & function &
parathyroid gland.... structure & function and hormone production & function
adrenal glands....structure & function & hormone production and function
the whole variety of adrenal gland hormones
pancreas.... structure & function & hormone production and function
neurotransmitters - function and release
pheremones...use and function
stress and physiology
cellular issues related to the glands
(such as the instances where we identified specific cells responsible for the secretion of the hormones)
issues related to stress and disease
issues related to A1C readings
pineal gland... structure & function and hormone production and function
comparison of the pineal tissues across species

Research into Endocrine Disruption

The effects on growth, development, and behavior of three endocrine disrupting compounds in our environment
understand the background of purposeful, acute, and chronic low level exposures to chemicals
understand the work on perfluoroocetanes
understand the work on pentachlorophenol
understand the work on phthalates

Readings

***Ferris et.al. 2001. Vassopressindependant flank marking... BMC Neuroscience. 2:10