Arithmetic Skills

- Basic addition and subtraction
- Basic multiplication
- Basic division
- Changing fractions to decimals
- Changing decimals to fractions
- Place value
- Roman numerals
- Multivariable fractions
- Multiplying fractions
- Dividing fractions
- Ratios and proportions
- Calculating percentages
- Converting percentages to decimals

Algebra

- Commutative rule of addition
- Commutative rule of multiplication
- Associative rule of addition
- Associative rule of multiplication
 - Distributive rule of multiplication
- Algebraic formulas

$$(a + b)^2 = a^2 + 2ab + b^2$$

$$(a - b)^2 = a^2 - 2ab + b^2$$

$$a^2 + b^2 = (a + b)^2 - 2ab$$

$$a^2 - b^2 = (a + b)(a - b)$$

$$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$

$$(a - b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$

$$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$$

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + bc + 2ca$$

Measurement and Data

- Using the metric system
- Measuring weight
- 12-hour clock vs. military time

- Calculating volume and capacity
- Measuring distance
- Interpreting graphs and tables

- Measuring temperature
- Measuring temperature

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Core Comprehension Skills	Critical Reading
Identifying the main idea	Fact vs. Opinion
Identifying supporting details	Objective statements
Identifying the conclusion	Subjective statements
ldentifying the theme	Comparing and contrasting
Identifying the setting	
Summarizing	
Recognizing the structure of a passage	
Identifying transition words and phrases	
Interpretation of Text	
Identifying word meanings using context	
Making logical inferences	
Identifying the purpose of a passage	
Identifying the tone of a passage	
Similes and metaphors	
Personification	
Points of view	

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Foundations of Vocabulary	Advanced Vocal	<u>oulary</u>
Common prefixes and suffixes	Aseptic	Palpation
Common root words	Contusion	Percussion
	Embolus	Prone
Compound words	Hypertension	Sphygmomanometer
Acronyms and abbreviations	Idiopathic	Supine
Etymology (the origin of words)	Intravenous	Tachycardia
Etymology (the origin of words)	Nosocomial	Thoracic
General Vocabulary		
Acute	Depress	Neurologic
Antidote	Desiccated	Parameter
Benign	Impaired	Pathology
Bilateral	Incidence	Posterior
Bile	Incision	Prognosis
Callous	Infection	Quarantine
Cardiac	Inflamed	Rationale
Cartilage	Invasive	Regimen
Cast	Ketones	Remission
Cavity	Kinetic	Sublingual
Cephalic	Laceration	Supposition
Concave	Lateral	Syndrome
Constrict	Lethargic	Triage
Convulsive	Malignant	Vascular
Defecate	Metabolism	☐ Vitals

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Parts of Speech	Common Grammatical Mistakes
Nouns	☐ Misplaced modifiers
Pronouns	☐ Incorrect pronoun usage
☐ Verbs	Subject-verb agreement
☐ Adjectives	☐ Verb tense
Adverbs	Run-on sentence
Prepositions	Sentence fragments
Conjunctions	Important Terms
Interjections	Active voice and passive voice
Commonly Confused Words	Mood
☐ Their vs. there vs. they're	Tone
Its vs. it's	Diction
☐ Your vs. you're	Syntax
☐ Affect vs. effect	
Lie vs. lay	
Fewer vs. less	

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Basics of Biology	<u>Cellular Biology</u>
Properties of water	Eukaryotic vs. prokaryotic
☐ Hydrogen bonding	Nucleus
Cohesion and adhesion	Mitochondria
Water as a universal solvent	Chloroplasts
Polarity of water	Endoplasmic reticulum
Carbohydrates	Golgi appparatus
Lipids	Lysosomes
Proteins	Cell membrane
Nucleic acids	Cellular respiration
Catabolic and anabolic pathways	ATP
Chemical processes within organism	Photosynthesis
	☐ Mitosis and meiosis
<u>Genetics</u>	
Mendelian genetics	☐ The role of DNA in protein synthesis
Non-Mendelian inheritance	DNA replication, transcription, and translation
Structure and function of DNA	Genetic code

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Fundamental Concepts	Chemical Reactions and Equations
Scientific notation	Balancing chemical equations
The metric system	Coefficients in chemical formulas
Celsius	Subscripts in chemical formulas
Fahrenheit	Synthesis reactions
Kelvin	Decomposition reactions
Atomic and Molecular Structure	Single replacement reactions
Atomic structure	Double replacement reactions
Atomic structure Atomic theory	Combustion reactions
Periodic table of elements	Calculating reactants and products
Ionic bonds	Molar relationships
Covalent bonds	Oxidation states
Metallic bonds	Redox reactions
Molecular geometry	☐ Electron transfer
Polarity	

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HESI CHEMISTRY CHECKLIST



Chemical Properties and Behaviors	Advanced Topics
Reaction rates	Radioactivity
Temperature	Nuclear reactions
Concentration	Half-life
Surface area	Nuclear energy
Catalysts	Enthalpy
Dynamic equilibrium	Entropy
Reversibility	Biochemistry
Le Chatelier's principle	
Properties of solutions	
Molarity	
Molality	
Percent composition	
pH scale	
Acid-base reactions	
pKa and pKb	
Boyle's Law	
Charles's Law	
Avogadro's Law	

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HESI ANATOMY AND PHYSIOLOGY CHECKLIST



Body Systems	Basic Concepts and Terminology
Integumentary system	Anterior/posterior
Skeletal system	Superior/inferior
Muscular system	Medial/lateral
Nervous system	Proximal/distal
Endocrine system	Superficial/deep
Circulatory system	Sagittal plane
Respiratory system	Coronal plane
Digestive system	Transverse plane
Urinary system	Dorsal cavity
Reproductive system	☐ Ventral cavity
	Homeostasis
Cellular and Tissue Structure	Metabolism
Histology	Anabolism and catabolism
Epithelial tissue	
Connective tissue	
Mitosis and meiosis	

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HESI A2 Test Prep Checklist



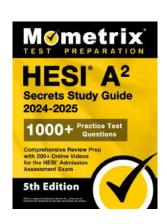
Studying for the HESI doesn't have to be a pain. Our comprehensive checklist highlights the key topics you need to know to ace the exam!

Checklists are used all around the world as a vital tool. It's been shown that using a simple checklist can help people like surgeons, astronauts, and pilots minimize errors and increase efficiency in the workplace.

Using a checklist to guide your studying provides a structured and organized way to track your progress and ensure that you are covering all the important information!

Note that this checklist does not cover everything that's on the HESI exam, and not every school requires you to take every section of the exam. For a more comprehensive review, visit mometrix.com/academy/hesi-a2-test/.

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HESI Flashcards





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