

ACS GENERAL CHEMISTRY EXAM SYLLABUS

ACS GENERAL CHEMISTRY EXAM SYLLABUS OUTLINES THE ESSENTIAL TOPICS AND CONCEPTS THAT STUDENTS NEED TO MASTER TO EXCEL IN THE AMERICAN CHEMICAL SOCIETY'S GENERAL CHEMISTRY EXAMINATION. THIS EXAM IS A STANDARDIZED TEST WIDELY USED BY COLLEGES AND UNIVERSITIES TO ASSESS STUDENTS' UNDERSTANDING OF FUNDAMENTAL CHEMISTRY PRINCIPLES. THE SYLLABUS COVERS A BROAD RANGE OF SUBJECTS INCLUDING ATOMIC STRUCTURE, CHEMICAL BONDING, THERMODYNAMICS, KINETICS, AND EQUILIBRIUM AMONG OTHERS. UNDERSTANDING THE DETAILED SYLLABUS HELPS STUDENTS PRIORITIZE THEIR STUDY EFFORTS AND PREPARE EFFECTIVELY FOR THE EXAM. THIS ARTICLE PROVIDES A COMPREHENSIVE OVERVIEW OF THE ACS GENERAL CHEMISTRY EXAM SYLLABUS, BREAKING DOWN EACH MAJOR SECTION AND ITS SUBTOPICS. ADDITIONALLY, IT HIGHLIGHTS KEY AREAS FOR FOCUSED STUDY AND OFFERS INSIGHTS INTO THE EXAM'S STRUCTURE AND CONTENT DISTRIBUTION.

- OVERVIEW OF THE ACS GENERAL CHEMISTRY EXAM
- DETAILED SYLLABUS BREAKDOWN
- ATOMIC STRUCTURE AND PERIODICITY
- CHEMICAL BONDING AND MOLECULAR STRUCTURE
- CHEMICAL REACTIONS AND STOICHIOMETRY
- STATES OF MATTER AND SOLUTIONS
- THERMODYNAMICS AND KINETICS
- CHEMICAL EQUILIBRIUM AND ACIDS/BASES
- PREPARATION TIPS BASED ON THE SYLLABUS

OVERVIEW OF THE ACS GENERAL CHEMISTRY EXAM

THE ACS GENERAL CHEMISTRY EXAM IS DESIGNED TO EVALUATE STUDENTS' GRASP OF CORE CHEMISTRY CONCEPTS TYPICALLY COVERED IN A TWO-SEMESTER GENERAL CHEMISTRY COURSE. THE EXAM CONSISTS OF MULTIPLE-CHOICE QUESTIONS THAT TEST KNOWLEDGE ACROSS VARIOUS FUNDAMENTAL TOPICS. THE SYLLABUS IS COMPREHENSIVE, REFLECTING THE BREADTH OF GENERAL CHEMISTRY AND ENSURING THAT STUDENTS DEMONSTRATE PROFICIENCY IN BOTH THEORETICAL UNDERSTANDING AND PRACTICAL APPLICATION. FAMILIARITY WITH THE EXAM SYLLABUS IS CRITICAL FOR EFFECTIVE PREPARATION, ENABLING STUDENTS TO ALLOCATE STUDY TIME ACCORDING TO TOPIC WEIGHT AND DIFFICULTY. THE EXAM SERVES AS A BENCHMARK FOR BOTH STUDENTS AND EDUCATORS TO ASSESS CHEMISTRY COMPETENCY AT THE UNDERGRADUATE LEVEL.

DETAILED SYLLABUS BREAKDOWN

THE ACS GENERAL CHEMISTRY EXAM SYLLABUS IS DIVIDED INTO SEVERAL KEY CONTENT AREAS, EACH REPRESENTING A CLUSTER OF RELATED CONCEPTS AND SKILLS. THESE AREAS ARE CONSTRUCTED TO COVER THE ENTIRETY OF GENERAL CHEMISTRY KNOWLEDGE FROM ATOMIC THEORY TO CHEMICAL EQUILIBRIA. THE EXAM TYPICALLY INCLUDES QUESTIONS FROM THE FOLLOWING MAIN CATEGORIES:

- ATOMIC STRUCTURE AND PERIODICITY
- CHEMICAL BONDING AND MOLECULAR STRUCTURE
- CHEMICAL REACTIONS AND STOICHIOMETRY

- STATES OF MATTER AND SOLUTIONS
- THERMODYNAMICS AND KINETICS
- CHEMICAL EQUILIBRIUM AND ACIDS/BASES

EACH SECTION CONTAINS SUBTOPICS THAT REQUIRE A THOROUGH UNDERSTANDING OF PRINCIPLES, CALCULATIONS, AND PROBLEM-SOLVING ABILITIES.

ATOMIC STRUCTURE AND PERIODICITY

ATOMIC THEORY AND SUBATOMIC PARTICLES

THIS SUBTOPIC COVERS THE FUNDAMENTAL CONCEPTS OF ATOMS, INCLUDING THE IDENTIFICATION AND PROPERTIES OF PROTONS, NEUTRONS, AND ELECTRONS. STUDENTS NEED TO UNDERSTAND ATOMIC NUMBER, MASS NUMBER, ISOTOPES, AND IONS. THE BOHR MODEL, QUANTUM MECHANICAL MODEL, AND ELECTRON CONFIGURATION PRINCIPLES SUCH AS THE PAULI EXCLUSION PRINCIPLE, HUND'S RULE, AND THE AUFBAU PRINCIPLE ARE ESSENTIAL COMPONENTS OF THIS SECTION.

PERIODIC TRENDS

THE PERIODIC TRENDS ENCOMPASS ATOMIC RADIUS, IONIZATION ENERGY, ELECTRON AFFINITY, AND ELECTRONEGATIVITY. MASTERY OF HOW THESE PROPERTIES CHANGE ACROSS PERIODS AND GROUPS IN THE PERIODIC TABLE IS CRITICAL. RECOGNIZING THESE TRENDS HELPS PREDICT ELEMENT BEHAVIOR AND CHEMICAL REACTIVITY.

CHEMICAL BONDING AND MOLECULAR STRUCTURE

TYPES OF CHEMICAL BONDS

THE SYLLABUS INCLUDES IONIC, COVALENT, AND METALLIC BONDING. STUDENTS MUST UNDERSTAND BOND FORMATION, LATTICE ENERGY, AND THE PROPERTIES ASSOCIATED WITH EACH BOND TYPE. ELECTRONEGATIVITY DIFFERENCES AND BOND POLARITY ARE FUNDAMENTAL TOPICS HERE.

MOLECULAR GEOMETRY AND VSEPR THEORY

UNDERSTANDING MOLECULAR SHAPES USING VALENCE SHELL ELECTRON PAIR REPULSION (VSEPR) THEORY IS NECESSARY. THIS INCLUDES PREDICTING BOND ANGLES, MOLECULAR POLARITY, AND HYBRIDIZATION STATES OF ATOMS WITHIN MOLECULES.

INTERMOLECULAR FORCES

STUDENTS SHOULD BE ABLE TO IDENTIFY AND EXPLAIN THE INFLUENCE OF INTERMOLECULAR FORCES SUCH AS HYDROGEN BONDING, DIPOLE-DIPOLE INTERACTIONS, AND LONDON DISPERSION FORCES ON PHYSICAL PROPERTIES LIKE BOILING AND MELTING POINTS.

CHEMICAL REACTIONS AND STOICHIOMETRY

TYPES OF CHEMICAL REACTIONS

KNOWLEDGE OF REACTION CLASSIFICATION INCLUDING SYNTHESIS, DECOMPOSITION, SINGLE REPLACEMENT, DOUBLE REPLACEMENT, AND COMBUSTION REACTIONS IS CRUCIAL. STUDENTS NEED TO BE PROFICIENT IN RECOGNIZING AND BALANCING THESE REACTION

TYPES.

STOICHIOMETRIC CALCULATIONS

CALCULATIONS INVOLVING MOLAR MASSES, MOLE-TO-MOLE CONVERSIONS, LIMITING REAGENTS, PERCENT YIELD, AND EMPIRICAL AND MOLECULAR FORMULAS ARE CORE TO THIS SUBTOPIC. ACCURATE STOICHIOMETRIC CALCULATIONS ARE FREQUENTLY TESTED ON THE EXAM.

STATES OF MATTER AND SOLUTIONS

GASES AND GAS LAWS

THE GAS LAWS SECTION INCLUDES BOYLE'S LAW, CHARLES'S LAW, AVOGADRO'S LAW, AND THE IDEAL GAS LAW. UNDERSTANDING PARTIAL PRESSURES AND GAS MIXTURES IS ALSO REQUIRED.

LIQUIDS AND SOLIDS

TOPICS INCLUDE PROPERTIES OF LIQUIDS, PHASE CHANGES, VAPOR PRESSURE, AND TYPES OF SOLIDS SUCH AS IONIC, COVALENT NETWORK, METALLIC, AND MOLECULAR SOLIDS. THE SYLLABUS COVERS PHASE DIAGRAMS AND THE CONCEPT OF INTERMOLECULAR FORCES AFFECTING STATE CHANGES.

SOLUTIONS AND CONCENTRATIONS

STUDENTS MUST UNDERSTAND SOLUBILITY, CONCENTRATION UNITS (MOLARITY, MOLALITY, PERCENT COMPOSITION), AND COLLIGATIVE PROPERTIES INCLUDING BOILING POINT ELEVATION AND FREEZING POINT DEPRESSION.

THERMODYNAMICS AND KINETICS

FIRST LAW OF THERMODYNAMICS AND ENTHALPY

THIS TOPIC ADDRESSES ENERGY CHANGES IN CHEMICAL REACTIONS, INCLUDING INTERNAL ENERGY, WORK, HEAT, AND ENTHALPY CHANGES. STUDENTS SHOULD BE FAMILIAR WITH CALORIMETRY AND HESS'S LAW FOR CALCULATING ENTHALPY CHANGES.

ENTROPY AND GIBBS FREE ENERGY

UNDERSTANDING ENTROPY, SPONTANEITY, AND THE GIBBS FREE ENERGY EQUATION IS CRITICAL TO PREDICTING REACTION FEASIBILITY AND EQUILIBRIUM POSITIONS.

CHEMICAL KINETICS

KINETICS COVERS REACTION RATES, RATE LAWS, RATE CONSTANTS, AND THE FACTORS AFFECTING REACTION RATES SUCH AS TEMPERATURE AND CATALYSTS. THE CONCEPT OF ACTIVATION ENERGY AND REACTION MECHANISMS IS ALSO INCLUDED.

CHEMICAL EQUILIBRIUM AND ACIDS/BASES

EQUILIBRIUM CONCEPTS

THE SYLLABUS INCLUDES THE DYNAMIC NATURE OF EQUILIBRIUM, THE EQUILIBRIUM CONSTANT (K), AND LE CHÂTELIER'S PRINCIPLE. STUDENTS SHOULD BE ABLE TO CALCULATE EQUILIBRIUM CONCENTRATIONS AND UNDERSTAND THE RELATIONSHIP BETWEEN K AND REACTION DIRECTION.

ACID-BASE THEORIES AND CALCULATIONS

TOPICS INCLUDE ARRHENIUS, BRONSTED-LOWRY, AND LEWIS ACID-BASE DEFINITIONS. STUDENTS MUST UNDERSTAND pH , pOH , STRONG AND WEAK ACIDS AND BASES, ACID DISSOCIATION CONSTANTS (K_a), AND BASE DISSOCIATION CONSTANTS (K_b).

BUFFERS AND TITRATIONS

BUFFER SOLUTION COMPOSITION, BUFFER CAPACITY, AND CALCULATIONS RELATED TO TITRATION CURVES AND EQUIVALENCE POINTS ARE ESSENTIAL AREAS WITHIN THIS SUBTOPIC.

PREPARATION TIPS BASED ON THE SYLLABUS

EFFECTIVE PREPARATION FOR THE ACS GENERAL CHEMISTRY EXAM INVOLVES A STRATEGIC APPROACH GUIDED BY THE DETAILED SYLLABUS. STUDENTS SHOULD PRIORITIZE UNDERSTANDING CORE CONCEPTS, PRACTICING PROBLEM-SOLVING, AND REVIEWING PAST EXAM QUESTIONS ALIGNED WITH THE SYLLABUS TOPICS. UTILIZING STUDY GUIDES THAT REFLECT THE ACS SYLLABUS AND FOCUSING ON AREAS WITH HIGHER QUESTION FREQUENCY CAN ENHANCE PERFORMANCE. CONSISTENT PRACTICE WITH STOICHIOMETRIC CALCULATIONS, EQUILIBRIUM PROBLEMS, AND THERMODYNAMICS QUESTIONS IS PARTICULARLY BENEFICIAL. TIME MANAGEMENT DURING STUDY SESSIONS AND ON THE EXAM DAY IS ESSENTIAL DUE TO THE EXAM'S COMPREHENSIVE SCOPE AND TIME CONSTRAINTS.

- CREATE A STUDY SCHEDULE BASED ON THE SYLLABUS TOPICS
- FOCUS ON MASTERING FUNDAMENTAL CONCEPTS BEFORE MOVING TO ADVANCED TOPICS
- UTILIZE PRACTICE EXAMS TO IDENTIFY STRENGTHS AND WEAKNESSES
- REVIEW MOLECULAR GEOMETRY AND PERIODIC TRENDS THOROUGHLY
- STRENGTHEN PROBLEM-SOLVING SKILLS WITH CHEMICAL EQUATIONS AND CALCULATIONS

FREQUENTLY ASKED QUESTIONS

WHAT TOPICS ARE COVERED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS?

THE ACS GENERAL CHEMISTRY EXAM SYLLABUS TYPICALLY COVERS ATOMIC STRUCTURE, PERIODIC PROPERTIES, CHEMICAL BONDING, STOICHIOMETRY, THERMOCHEMISTRY, CHEMICAL KINETICS, CHEMICAL EQUILIBRIUM, ACIDS AND BASES, ELECTROCHEMISTRY, AND BASIC ORGANIC AND NUCLEAR CHEMISTRY.

IS STOICHIOMETRY INCLUDED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS?

YES, STOICHIOMETRY IS A FUNDAMENTAL TOPIC INCLUDED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS, FOCUSING ON MOLE CALCULATIONS, LIMITING REACTANTS, AND PERCENT YIELD.

DOES THE ACS GENERAL CHEMISTRY EXAM SYLLABUS INCLUDE THERMODYNAMICS?

YES, THERMODYNAMICS IS AN IMPORTANT PART OF THE ACS GENERAL CHEMISTRY EXAM SYLLABUS, COVERING TOPICS SUCH AS ENTHALPY, ENTROPY, GIBBS FREE ENERGY, AND THE LAWS OF THERMODYNAMICS.

ARE ACIDS AND BASES PART OF THE ACS GENERAL CHEMISTRY EXAM SYLLABUS?

YES, ACIDS AND BASES, INCLUDING CONCEPTS SUCH AS pH, pK_a, ACID-BASE EQUILIBRIA, AND TITRATIONS, ARE INCLUDED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS.

DOES THE ACS GENERAL CHEMISTRY EXAM TEST KNOWLEDGE OF CHEMICAL KINETICS?

YES, CHEMICAL KINETICS, INCLUDING REACTION RATES, RATE LAWS, AND MECHANISMS, IS A KEY COMPONENT OF THE ACS GENERAL CHEMISTRY EXAM SYLLABUS.

IS ELECTROCHEMISTRY INCLUDED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS?

YES, ELECTROCHEMISTRY, COVERING REDOX REACTIONS, GALVANIC AND ELECTROLYTIC CELLS, AND ELECTRODE POTENTIALS, IS PART OF THE ACS GENERAL CHEMISTRY EXAM SYLLABUS.

ARE MOLECULAR STRUCTURE AND BONDING TOPICS ON THE ACS GENERAL CHEMISTRY EXAM SYLLABUS?

YES, THE EXAM INCLUDES MOLECULAR STRUCTURE AND BONDING TOPICS SUCH AS VSEPR THEORY, HYBRIDIZATION, MOLECULAR ORBITALS, AND INTERMOLECULAR FORCES.

DOES THE ACS GENERAL CHEMISTRY EXAM SYLLABUS INCLUDE PERIODIC TRENDS?

YES, PERIODIC TRENDS SUCH AS ATOMIC RADIUS, IONIZATION ENERGY, AND ELECTRONEGATIVITY ARE COVERED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS.

IS NUCLEAR CHEMISTRY PART OF THE ACS GENERAL CHEMISTRY EXAM SYLLABUS?

YES, BASIC NUCLEAR CHEMISTRY CONCEPTS INCLUDING TYPES OF RADIATION, HALF-LIFE, AND NUCLEAR REACTIONS ARE INCLUDED IN THE ACS GENERAL CHEMISTRY EXAM SYLLABUS.

WHERE CAN I FIND THE OFFICIAL ACS GENERAL CHEMISTRY EXAM SYLLABUS?

THE OFFICIAL ACS GENERAL CHEMISTRY EXAM SYLLABUS CAN BE FOUND ON THE AMERICAN CHEMICAL SOCIETY'S WEBSITE OR THROUGH YOUR INSTITUTION'S CHEMISTRY DEPARTMENT THAT ADMINISTERS THE EXAM.

ADDITIONAL RESOURCES

1. "CHEMISTRY: THE CENTRAL SCIENCE" BY BROWN, LEMAY, BURSTEN, MURPHY, WOODWARD, AND STOLTZFUS

THIS COMPREHENSIVE TEXTBOOK COVERS FUNDAMENTAL CONCEPTS IN GENERAL CHEMISTRY, MAKING IT A POPULAR CHOICE FOR ACS EXAM PREPARATION. IT OFFERS CLEAR EXPLANATIONS, REAL-WORLD APPLICATIONS, AND A VARIETY OF PRACTICE PROBLEMS. THE BOOK'S THOROUGH APPROACH HELPS STUDENTS BUILD A STRONG FOUNDATION IN CHEMICAL PRINCIPLES ALIGNED WITH THE ACS SYLLABUS.

2. "ACS GENERAL CHEMISTRY STUDY GUIDE" BY ACCEPTED, INC.

SPECIFICALLY DESIGNED FOR THE ACS GENERAL CHEMISTRY EXAM, THIS STUDY GUIDE PROVIDES TARGETED REVIEW MATERIALS, PRACTICE QUESTIONS, AND TEST-TAKING STRATEGIES. IT EMPHASIZES KEY TOPICS SUCH AS ATOMIC STRUCTURE, THERMODYNAMICS, KINETICS, AND EQUILIBRIUM. THE GUIDE IS IDEAL FOR FOCUSED REVISION AND SELF-ASSESSMENT BEFORE THE

EXAM.

3. *"GENERAL CHEMISTRY: PRINCIPLES AND MODERN APPLICATIONS"* BY PETRUCCI, HERRING, MADURA, AND BISSONNETTE
THIS BOOK OFFERS A DETAILED EXPLORATION OF GENERAL CHEMISTRY CONCEPTS WITH A MODERN APPROACH. IT INCLUDES NUMEROUS EXAMPLES, PROBLEM SETS, AND CONCEPTUAL QUESTIONS TO ENHANCE UNDERSTANDING. ITS STRUCTURE CLOSELY FOLLOWS THE TOPICS TESTED IN THE ACS EXAM, MAKING IT A VALUABLE RESOURCE FOR EXAM CANDIDATES.

4. *"SCHAUM'S OUTLINE OF GENERAL CHEMISTRY"* BY HERBERT MEISLICH, ET AL.
KNOWN FOR ITS CONCISE EXPLANATIONS AND EXTENSIVE PROBLEM SETS, THIS OUTLINE IS AN EXCELLENT SUPPLEMENTARY RESOURCE. IT OFFERS SOLVED PROBLEMS AND PRACTICE QUESTIONS THAT COVER ALL MAJOR TOPICS OF GENERAL CHEMISTRY. THE FORMAT HELPS REINFORCE LEARNING AND IMPROVE PROBLEM-SOLVING SKILLS CRITICAL FOR THE ACS EXAM.

5. *"CHEMICAL PRINCIPLES: THE QUEST FOR INSIGHT"* BY PETER ATKINS AND LORETTA JONES
THIS TEXT EMPHASIZES CONCEPTUAL UNDERSTANDING AND THE DEVELOPMENT OF CHEMICAL INSIGHT. IT INTEGRATES THEORY WITH PRACTICAL EXAMPLES AND INCLUDES EXERCISES THAT MIRROR THE DIFFICULTY OF ACS EXAM QUESTIONS. THE BOOK'S APPROACH AIDS STUDENTS IN MASTERING BOTH THE QUANTITATIVE AND QUALITATIVE ASPECTS OF CHEMISTRY.

6. *"BARRON'S CHEMISTRY: THE EASY REVIEW"* BY NEIL D. JESPERSEN AND PAMELA KERRIGAN
BARRON'S REVIEW BOOK PROVIDES A STRAIGHTFORWARD OVERVIEW OF ESSENTIAL CHEMISTRY TOPICS ALONG WITH PRACTICE TESTS AND REVIEW QUESTIONS. IT IS DESIGNED FOR QUICK REVIEW AND REINFORCEMENT OF KEY CONCEPTS RELEVANT TO THE ACS EXAM. THE BOOK'S CLEAR LAYOUT AND SUMMARIES MAKE IT USER-FRIENDLY FOR EXAM PREPARATION.

7. *"INTRODUCTORY CHEMISTRY: A FOUNDATION"* BY STEVEN S. ZUMDAHL
THIS TEXT FOCUSES ON FUNDAMENTAL CHEMISTRY PRINCIPLES WITH AN ACCESSIBLE WRITING STYLE SUITABLE FOR BEGINNERS AND THOSE REVIEWING FOR THE ACS EXAM. IT INCLUDES NUMEROUS PRACTICE PROBLEMS, ILLUSTRATIONS, AND REAL-WORLD APPLICATIONS. THE BOOK'S CLEAR PRESENTATION SUPPORTS EFFECTIVE LEARNING AND EXAM READINESS.

8. *"CHEMISTRY FOR THE BIOSCIENCES: THE ESSENTIAL CONCEPTS"* BY JONATHAN CROWE AND TONY BRADSHAW
WHILE GEARED TOWARDS BIOSCIENCES, THIS BOOK COVERS CORE GENERAL CHEMISTRY TOPICS RELEVANT TO THE ACS SYLLABUS. IT EMPHASIZES UNDERSTANDING CHEMICAL PRINCIPLES IN BIOLOGICAL CONTEXTS, WHICH CAN ENRICH A STUDENT'S GRASP OF CHEMISTRY CONCEPTS. THE BOOK OFFERS CLEAR EXPLANATIONS AND PRACTICE QUESTIONS IDEAL FOR EXAM REVIEW.

9. *"GENERAL CHEMISTRY ONLINE: ACS EXAM PREPARATION"* BY MARK BISHOP
THIS RESOURCE COMBINES ONLINE MATERIALS WITH TRADITIONAL STUDY APPROACHES TAILORED TO THE ACS GENERAL CHEMISTRY EXAM. IT INCLUDES VIDEO TUTORIALS, QUIZZES, AND PRACTICE EXAMS DESIGNED TO REINFORCE KEY CONCEPTS. THE INTERACTIVE FORMAT SUPPORTS DIVERSE LEARNING STYLES AND HELPS STUDENTS SOLIDIFY THEIR KNOWLEDGE EFFECTIVELY.

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range of topics such as: social context and news, machine learning, question answering, ranking, evaluation methodology, probabilistic modeling, evaluation issues, multimedia and collaborative filtering, and many more.

acs general chemistry exam syllabus: Acs General Chemistry Study Guide - Acs Exam Prep Secrets, Full-Length Practice Test, Detailed Answer Explanations: [Includes Step-By-Step Video Tutor Matthew Bowling, 2023-07-11 Mometrix Test Preparation's ACS General Chemistry Study Guide - ACS Exam Prep Secrets is the ideal prep solution for anyone who wants to pass their ACS General Chemistry Exam. The exam is extremely challenging, and thorough test preparation is essential for success. Our study guide includes: * Practice test questions with detailed answer explanations * Step-by-step video tutorials to help you master difficult concepts * Tips and strategies to help you get your best test performance * A complete review of all general chemistry test sections Mometrix Test Preparation is not affiliated with or endorsed by any official testing organization. All organizational and test names are trademarks of their respective owners. The Mometrix guide is filled with the critical information you will need in order to do well on your general chemistry exam: the concepts, procedures, principles, and vocabulary that the American Chemical Society (ACS) Examinations Institute expects you to have mastered before sitting for your exam. Test sections include: * Atoms * Properties of Matter * Bonding and Intermolecular Interactions * Reactions * Kinetics and Equilibrium * Acids and Bases * Thermodynamics * Electrochemistry * Nuclear Chemistry * Safety, Math, and Data in the Laboratory ...and much more! Our guide is full of specific and detailed information that will be key to passing your exam. Concepts and principles aren't simply named or described in passing, but are explained in detail. The Mometrix general chemistry study guide is laid out in a logical and organized fashion so that one section naturally flows from the one preceding it. Because it's written with an eye for both technical accuracy and accessibility, you will not have to worry about getting lost in dense academic language. Any test prep guide is only as good as its practice questions and answer explanations, and that's another area where our guide stands out. The Mometrix test prep team has provided plenty of general chemistry practice test questions to prepare you for what to expect on the actual exam. Each answer is explained in depth, in order to make the principles and reasoning behind it crystal clear. Many concepts include links to online review videos where you can watch our instructors break down the topics so the material can be quickly grasped. Examples are worked step-by-step so you see exactly what to do. We've helped hundreds of thousands of people pass standardized tests and achieve their education and career goals. We've done this by setting high standards for Mometrix Test Preparation guides, and our ACS General Chemistry Study Guide - ACS Exam Prep Secrets is no exception. It's an excellent investment in your future. Get the general chemistry review you need to be successful on your exam.

acs general chemistry exam syllabus: Survival Handbook for the New Chemistry Instructor Diane M. Bunce, Cinzia M. Muzzi, 2004 This book provides an overview of the issues facing new chemistry faculty in preparation for teaching. Serving as a reference to answer specific questions new chemistry faculty encounter, this book is comparable to sitting down with a colleague in the department and talking through some ideas, or gaining some pointers on how to avoid common pitfalls. It is the one single place new chemistry faculty can go to find practical information on how to teach and how to prepare for teaching their first course. Chapters are written both by established experts in the field and by new professors within their first couple of years of teaching.

acs general chemistry exam syllabus: Tests and Examinations Lewis R. Aiken, 1998-04-17 This book is a relatively brief but fairly comprehensive treatment of psychological and educational assessment in the cognitive domain. It is designed primarily for researchers and practitioners in the behavioral sciences who use objective tests, essay tests, and performance tests in applied and theory based research on employee and student selection, placement, promotion, certification or licensing, and / or for evaluating the effects of instruction, training, and intervention programs on behavior and cognition.

acs general chemistry exam syllabus: ACS General Chemistry Study Guide , 2020-07-06

Test Prep Books' ACS General Chemistry Study Guide: Test Prep and Practice Test Questions for the American Chemical Society General Chemistry Exam [Includes Detailed Answer Explanations] Made by Test Prep Books experts for test takers trying to achieve a great score on the ACS General Chemistry exam. This comprehensive study guide includes: Quick Overview Find out what's inside this guide! Test-Taking Strategies Learn the best tips to help overcome your exam! Introduction Get a thorough breakdown of what the test is and what's on it! Atomic Structure Electronic Structure Formula Calculations and the Mole Stoichiometry Solutions and Aqueous Reactions Heat and Enthalpy Structure and Bonding States of Matter Kinetics Equilibrium Acids and Bases Solubility Equilibria Electrochemistry Nuclear Chemistry Practice Questions Practice makes perfect! Detailed Answer Explanations Figure out where you went wrong and how to improve! Studying can be hard. We get it. That's why we created this guide with these great features and benefits: Comprehensive Review: Each section of the test has a comprehensive review created by Test Prep Books that goes into detail to cover all of the content likely to appear on the test. Practice Test Questions: We want to give you the best practice you can find. That's why the Test Prep Books practice questions are as close as you can get to the actual ACS General Chemistry test. Answer Explanations: Every single problem is followed by an answer explanation. We know it's frustrating to miss a question and not understand why. The answer explanations will help you learn from your mistakes. That way, you can avoid missing it again in the future. Test-Taking Strategies: A test taker has to understand the material that is being covered and be familiar with the latest test taking strategies. These strategies are necessary to properly use the time provided. They also help test takers complete the test without making any errors. Test Prep Books has provided the top test-taking tips. Customer Service: We love taking care of our test takers. We make sure that you interact with a real human being when you email your comments or concerns. Anyone planning to take this exam should take advantage of this Test Prep Books study guide. Purchase it today to receive access to: ACS General Chemistry review materials ACS General Chemistry exam Test-taking strategies

acs general chemistry exam syllabus: *Signs & Traces* Clifford Adelman, 1989

acs general chemistry exam syllabus: *Disciplinary Styles in the Scholarship of Teaching and Learning* Mary Taylor Huber, Sherwyn P. Morreale, 2023-07-21 Ten sets of disciplinary scholars respond to an orienting essay that raises questions about the history of discourse about teaching and learning in the disciplines, the ways in which disciplinary styles influence inquiry into teaching and learning, and the nature and roles of interdisciplinary exchange. The authors hope to contribute to a common language for trading ideas, enlarging our pedagogical imaginations, and strengthening our scholarly work. Disciplines represented: chemistry; communication studies, engineering, English studies, history, management sciences, mathematics, psychology, and sociology. A collaboration of The Carnegie Foundation for the Advancement of Teaching and AAHE

acs general chemistry exam syllabus: ACS General Chemistry Study Guide Joshua Rueda, 2023-04-12 Test Prep Books' ACS General Chemistry Study Guide: 2 Practice Exams and ACS Test Prep Book [3rd Edition] Made by Test Prep Books experts for test takers trying to achieve a great score on the ACS General Chemistry exam. This comprehensive study guide includes: Quick Overview Find out what's inside this guide! Test-Taking Strategies Learn the best tips to help overcome your exam! Introduction Get a thorough breakdown of what the test is and what's on it! Chemistry Reference Sheet Atomic Structure Electronic Structure Formula Calculations and the Mole Stoichiometry Solutions and Aqueous Reactions Heat and Enthalpy Structure and Bonding States of Matter Kinetics Equilibrium Acids and Bases Solubility Equilibria Thermodynamics Electrochemistry Nuclear Chemistry Practice Test #1 Practice Test #2 Detailed Answer Explanations Studying can be hard. We get it. That's why we created this guide with these great features and benefits Comprehensive Review: Each section of the test has a comprehensive review created by Test Prep Books that goes into detail to cover all of the content likely to appear on the test. ACS General Chemistry Practice Test Questions: We want to give you the best practice you can find. That's why the Test Prep Books practice questions are as close as you can get to the actual test. Answer Explanations: Every single problem is followed by an answer explanation. We know it's

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acs general chemistry exam syllabus: *Abstracts of Papers - American Chemical Society* American Chemical Society. Meeting, American Chemical Society, 1978

acs general chemistry exam syllabus: Preparing for Your ACS Examination in General Chemistry - the Official Guide LUCY T. EUBANKS, 2018-10-15 This guide is separated into first-term and second-term general chemistry material. Each section contains 8 chapters of material that also aligns to most general chemistry textbooks for a seamless addition to study materials for students. Each chapter is designed with an introductory section of the material including common representations and where to find this material in a textbook. The second section provides worked examples of typical, multiple choice questions including how the correct answer is determined as well as how the incorrect answers were determined. Also included for each study problem is a listing of the corresponding practice questions that use that concept. The final section is a series of practice problems to test the concepts collectively. The key is provided on a separate page for all study and practice problems.

acs general chemistry exam syllabus: Preparing for Your ACS Examination in General Chemistry Lucy T. Eubanks, I. Dwaine Eubanks, 1998

acs general chemistry exam syllabus: Computers in Chemical Education and Research E. Ludena, 2013-03-09 The impact of computers on all realms of Chemistry has been one of the most important factors in the development of this science during the last years. In recognition of this fact, in 1971, the First International Conference on Computers in Chemical Research and Education, was held at DeKalb, Illinois, USA. A second Conference took place in Ljubljana, Yugoslavia in 1973 and this third Conference in Caracas, Venezuela, in 1976. The aim of these conferences was to provide a high level forum for the leading researchers to exchange information at the frontiers of present day computer applications to the different fields of Chemistry. The present Third International Conference on Computers in Chemical Research, Education and Technology, whose proceedings are published in the present volume, was conceived, by means of a series of invited lectures, as a survey of the present-date state of the art in some of the most relevant areas of computer applications in Chemistry.

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