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Nota di contenuto	Cover -- Preface -- About the Illustrator: Maury Aaseng -- Contributors -- Reviewers -- Acknowledgments -- Section 1. Neuroanatomical and Neurophysiological Foundations -- Chapter 1. Introduction and Organization of Neuroscience Fundamentals in Communication Sciences and Disorders -- What Is Neuroscience? -- What Is This Book About? -- The View From 30,000 Feet Up -- Overview of Section 1: Neuroanatomical and Neurophysiological Foundations -- Overview of Section 2: Sensory Systems -- Overview of Section 3: Motor Systems -- Overview of Section 4: Neural Substrates of -- Speech, Language, and Hearing Study Strategies and Tips -- Closing Thoughts -- Chapter 2. Basic Structure and Function of Neurons -- Introduction and Learning Objectives -- Discovery of Two Classes of Cells in the Nervous System -- The Neuron -- Neurons Are Made for Signaling and Communication -- Neurons Never Function Alone -- Neurons Perform Fundamental Activities -- Reflexes Provide a Window Into the Fundamental Operation of Neural Networks -- Nerve Cells Have Different Shapes, Sizes, and Functions -- Structural Features of the Neuron -- Soma, Cell Membrane, and Cytoskeleton -- Cytoplasm -- Mitochondria -- Smooth and Rough Endoplasmic Reticulum -- Golgi

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CN VII: Facial (SVE, GVE, SVA, GSA) -- CN VIII: Auditory-Vestibular (SSA) -- CN IX: Glossopharyngeal (SVE, GVE, GVA, SVA, GSA) -- CN X: Vagus (SVE, GVE, GVA, SVA, GSA) -- CN XI: Spinal Accessory (SVE) -- CN XII: Hypoglossal (GSE) -- The Top Ten List -- Chapter 5 Abbreviations -- Study Questions and Activities -- References -- CHAPTER 6. Neuroanatomy of the Human Nervous System: The Diencephalon, Cerebrum, and the Cerebral Cortex -- Introduction and Learning Objectives -- The Diencephalon -- The Thalamus: "Gatekeeper" of Ascending Information to the Cerebral Cortex -- The Thalamus Is a Collection of Nuclei With Unique Inputs and Outputs -- The Hypothalamus: "CEO" of the Body's Homeostatic Regulatory Systems -- The Hypothalamic-Pituitary-Adrenal Axis (HPA) Operates as a Feedback Control System -- Hypothalamus Consists of Numerous Nuclei With Unique Operations -- Hypothalamic Nuclei Participate in a Wide Range of Homeostatic Functions -- The Cerebrum: The Center of Our Lives and Who We Are -- The Lobes of the Cerebrum -- The Frontal Lobe: The Cognitive and Motor Control Center of the Cerebrum -- Frontal Lobe: Anatomical Features -- Frontal Lobe: Functional Features -- The Parietal Lobe: Multimodal Sensory Center of the Cerebrum -- Parietal Lobe: Anatomical Features -- Parietal Lobe: Functional Features -- The Temporal Lobe: The "Can You Hear Me Now" and "What Am I" Cerebral Region -- Temporal Lobe: Anatomical Features -- Temporal Lobe: Functional Features -- The Occipital Lobe: The Visual Center of the Cerebrum -- Occipital Lobe: Anatomical Features -- Occipital Lobe: Functional Features -- The Insula: Is It a Lobe or Not? -- The Cerebral Cortex -- Anatomical Features of the Cerebral Cortex -- Organization of the Cerebral Cortex: Brodmann's Areas and Cortical Columns -- The Cortex Is Arranged to Support Serial and Parallel Processing of Information.
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Sommario/riassunto

Neuroscience Fundamentals for Communication Sciences and Disorders, Second Edition is a comprehensive textbook primarily designed for undergraduate neural bases or graduate neuroscience courses in communication sciences and disorders programs (CSD). The text can also be used as an accessible go-to reference for speech-language pathology and audiology clinical professionals practicing in medical and rehab settings. Written with an engaging and conversational style, the author uses humor and analogies to explain concepts that are often challenging for students. Complemented by more than 400 visually rich and beautifully drawn full-color illustrations, the book emphasizes brain and behavior relationships while also ensuring coverage of essential neuroanatomy and neurophysiology in an integrative fashion. With a comprehensive background in the principles, processes, and structures underlying the workings of the human nervous system, students and practitioners alike will be able to better understand and apply brain-behavior relationships to make appropriate clinical assessments and treatment decisions.
