1. Scheme of Programme
MSc Neuroscience 2024-25

(Scheme PG A2: Postgraduate Programmes (Course work + Research)

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A07	Neurochemistry		3		2	3		1	4	25	50	5	20	100
CC-A08	Behaviour and Cognitive Neuroscience		3		2	3		1	4	25	50	5	20	100
CC-A09	Clinical Neuroscience		3		2	3		1	4	25	50	5	20	100
Discipline Specific Elective Courses														
DSE-03	Regulatory Systems		3			3			3	25	50			75
Multidisciplinary Course(s)														
MDC-03	One from Pool								3					75
Skill Enhancement Course(s)														
SEC-02	One from Pool								2					50
Value-added Course(s)														
VAC-02	One from Pool								2					50
Seminar														
Seminar					4			2	2			15	35	50
Internship/Field Activity#														
					8			4	4			30	70	100
Total Credits									28					700

#Fourcreditsofinternshipearnedbyastudentduringsummerinternshipafter2ndsemesterwillbecountedin3rd semesterofastudentwhopursue2yearPGProgrammewithouttakingexitoption.

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Ability Enhancement Course(s)														
AEC-03	One from Pool								2					50

Dissertation/Project Work														
Dissertation	**Dissertation**								20					500
Total Credits									22					550

Multidisciplinary Course from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-3	Neurocognitive Science		3			3			3	25	50			75

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-4	Clinical Neurobiology		3			3			3	25	50			75

Skill Enhancement Course from the department for pool of the Courses in the University

(These courses are offered by each department for students of other departments/same department and is designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work.)

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-2	Soft Skills and Career Preparation		2			2			2	15	35			50

Value Added Course from the department for pool of the Courses in the University

(All the departments will offer value added course for the students of same or different departments.

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-2	Learning and Memory		2			2			2	15	35			50

Curriculum (2024-26)

Semester	CourseID	Title of the Paper (s)	Course type	Credits			
				L	T	P	Total
Third	CC	Neurochemistry	Core	3	0	1	4
	CC	Behaviour and Cognitive Neuroscience	Core	3	0	1	4
	CC	Clinical Neuroscience	Core	3	0	1	4
	DSE	Regulatory Systems	DSE	3	0	0	3
		One from Pool	MDC				3
		One from Pool	SEC				2
		One from Pool	VAC				2
		Seminar					2
		Internship					4
Total credits for Third Semester							**28**
Fourth		One from Pool	AEC				2
		Dissertation					20
Total credits for Fourth Semester							**22**

Detailed Syllabus (2024-2026)

Semester-III (Credits 28)

CC*NEUROCHEMISTRY*

Note: The topics included in neurochemistry are in line with the neurochemistry curriculum developed by a group of Neurochemists at a conference organized for the purpose and subsequently updated with every new edition of Basic Neurochemistry by Siegel. This paper is appropriate for postgraduate students in neuroscience expected to take up research in modern areas of neuroscience. It is expected that the students would learn the basics of neurochemistry.

Core Course (Lectures: 40)	Maximum Theory Marks: 75
Time Allowed: 3 Hrs	External Marks: 50
Credits: 3	Internal Assessment: 25

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I **Lectures: 10**

1. Synaptic transmission and cellular signaling: An overview
2. Acetylcholine: Chemistry, synthesis, storage and release; Nicotinic and muscarinic receptors
3. Catecholamine: Biosynthesis, storage and release; Dopamine, adrenergic receptors
4. Serotonin: Synthesis, action and distribution; Role of serotonin receptors in behavior
5. Excitatory amino acid transmitters: Synthesis, metabolism, distribution and receptor subtypes

Unit-II **Lectures: 10**

6. Organizing centers in the developing brain, Forebrain development, prosomeres and Pax genes
7. Dorsal-ventral polarity in the neural tube, Patterning of the cerebral cortex, Dorsal Neural tube and neural crest
8. Genesis and migration of neurons; cellular and molecular mechanisms describing the generation of appropriate number of neurons and glia from neuronal precursors
9. Generation of neurons and glia and control of neuronal and glial cell population
10. Histogenesis of cerebral cortex and cerebellar cortex, Molecular mechanisms of neuronal migration in PNS and CNS

Unit-III **Lectures: 10**

11. Neurogenesis in post-embryonic and adult age
12. Neuronal determination and differentiation: Transcriptional hierarchies in invariant lineages in C. elegans; Spatial and temporal coordinates of determination and Drosophila CNS neurobast segregation
13. Asymmetric cell division and asymmetric fate, Specification and differentiation of

vertebrate neural crests

14. Naturally occurring Neuronal death during development: target dependent and innervation dependent neuronal death, Intracellular-signaling pathways that mediate death
15. Neurotrophic factors: Neurotrophins and their receptors, Intracellular-signaling pathways that mediate survival

Unit-IV **Lectures: 10**

16. Axon growth, path finding and nerve patterns: Growth Cone, Dynamic cytoskeleton, axonal navigation and axon elongation, Directional information to growth cones: cell adhesion molecules, repulsive guidance, chemotaxis gradients and other guidance molecules; Target recognition and Target selection
17. Synapse formation and elimination: Initiation of synaptic contacts, structure and function of newly formed synapses, Presynaptic and postsynaptic elements, synapse elimination
18. Experience and Refinement of synaptic connections, Rearrangement of developing neuronal connections: Synaptic rearrangement in different parts of the nervous system
19. Denervation and regeneration of synaptic connections; Effects of Denervation on the postsynaptic cell; Denervation super-sensitivity, susceptibility to innervation, and axonal sprouting;
20. Repairing the damaged brain; Regeneration of central and peripheral axons in mammalian nervous system.

Suggested Books:

1. Sanes, Development of the Nervous System (3rd Edition), Academic Press,2012
2. Squire, Fundamental Neuroscience (4th Edition), Elsevier, 2013
3. Kandel, Principles of Neural Science (5th edition), McGraw Hill,2013
4. Gilbert, Developmental Biology (11th edition) Sinnaur Publication, 2016

PRACTICAL-

Core Course (Lectures: 10)	Maximum Practical Marks: 25
Time Allowed: 3 Hrs	External Marks: 20
Credits: 1	Internal Assessment: 5

1. Estimation of Neurotransmitters (Dopamine or Serotonin) Using Spectrophotometry
2. pH and Temperature Effect on Enzyme Activity (Acetylcholinesterase or Monoamine Oxidase)
3. Extraction and Identification of Lipids from Brain Tissue
4. Enzyme Activity Assay for Acetylcholinesterase (AChE)
5. Effect of pH on Neurotransmitter Stability

CC: BEHAVIOUR AND COGNITIVE NEUROSCIENCE

Note: It is expected that in this paper the students will be exposed to the basic understanding of evolution of human brain and behaviour, cellular and genetics aspects of behaviour, cognitive development, neural control of attention, language acquisition and language processing, learning and memory, and cognitive functions like thought and consciousness. While this is the front line of neuroscience research today the students will be given the basic elementary exposure to the subject to stimulate them to undertake further research in this challenging area, it is essential to repeat that only introductory aspects of the subject shall be dealt.

Core Course (Lectures: 40)	Maximum Theory Marks: 75
Time Allowed: 3 Hrs	External Marks: 50
Credits: 3	Internal Assessment: 25

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I **Lectures: 10**

1. A brief history of cognitive neuroscience
2. Organization of central nervous system in relation to cognition
3. Evolutionary and comparative principles, mammalian evolution
4. Human Brain Evolution
5. Brain and cognitive development

Unit-II **Lectures: 10**

6. Aging and cognition
7. Pathological processes in cognitive development and aging
8. Cognitive functions of the motor system
9. Visual perception of objects: Neuronal basis of object recognition, Perception and recognition of specific classes of objects
10. Spatial cognition: Neural system of spatial cognition- Parietal cortex, Frontal cortex, Hippocampus and adjacent cortex

Unit-III **Lectures: 10**

11. Theories of learning and memory: Models and mechanisms of short-term and long-term memory
12. Learning and Memory: Basic Systems: Basic mechanisms of learning, key insights from invertebrate studies, Classical conditioning in vertebrates
13. Long-term potentiation and long-term depression
14. Learning and memory: Brain systems, Major memory systems in mammalian brain, Multiple memory systems and behavior

Unit-IV **Lectures: 10**

15. Attention: Verities of attention and Neglect syndrome, Visual system and attention
16. Language and communication: Animal communication, Human language, Neuronal organization for language
17. Executive brain functions: Role of prefrontal cortex, Neurophysiology of prefrontal cortex, Theories of prefrontal cortex function
18. Consciousness

Suggested Books:

1. Squire, Fundamental Neuroscience (4th Edition), Elsevier, 2013
2. Kandel, Principles of Neural Science (5th edition), McGraw Hill,2013
3. Banich, Cognitive neuroscience (3rd Edition) Wordsworth, 2011
4. Gazzaniga, Cognitive Neuroscience (4th Edition) Norton, 2014

PRACTICAL-

Core Course (Lectures: 10)	Maximum Practical Marks: 25
Time Allowed: 3 Hrs	External Marks: 20
Credits: 1	Internal Assessment: 5

1. Automated exploratory behaviour recording using activity monitor
2. Assessment of neuromuscular function/performance using Grip Strength Meter
3. Studies on locomotor behaviour in rats using Open Field test
4. Studies on spatial learning behaviour using T-maze with the help of Any Mazesoftware
5. Studies on spatial learning behaviour using Y-maze with the help of Any Mazesoftware
6. Elevated Plus maze for anxiety like behaviour with the help of Any Maze software
7. Morris water maze for learning and memory with the help of Any Maze software

CC CLINICAL NEUROSCIENCE

Note: Research in neuropathology/neurological disorders involves specific neurochemical changes. This paper will aim at introducing the students to the neurochemical basis of brain disorders and principles and applications of important diagnostic tools. Basis knowledge of mechanism of common drugs involved in different neurological disorders such as Parkinson, Alzheimer, Epilepsy and Psychosis.

Core Course (Lectures: 40)	Maximum Theory Marks: 75
Time Allowed: 3 Hrs	External Marks: 50
Credits: 3	Internal Assessment: 25

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I **Lectures: 10**

1. Neurochemical and molecular mechanisms of peripheral Neuropathy; Diseases involving myelin
2. Multiple sclerosis and other demyelinated disorders
3. Genetic disorders of Lipid, glycoprotein, and Mucopolysaccharide metabolism
4. Molecular and genetic aspects and diagnostic characteristics of Duchenne Muscular dystrophy
5. Nutritional and metabolic Diseases: Disorders of amino acid metabolism

Unit-II **Lectures: 10**

6. Cellular and molecular mechanisms of neuroinflammation
7. Metabolic Encephalopathies and Coma
8. Neurotransmitters and disorders of basal ganglia; Molecular targets of abused drugs
9. Ischemia and hypoxia
10. Epileptic seizures

Unit-III **Lectures: 10**

11. Genetics and diagnosis of Huntington disease and other triplet repeat disorders
12. Alzheimer's disease: Molecular, genetic, immunological aspects and diagnostics
13. Theories of aging; Neurobiology of aging: cellular and molecular aspects of neuronal aging
14. Aging and neurodegeneration
15. Parkinson's disease

Unit-IV **Lectures: 10**

16. Motor Neuron Diseases
17. Prion's Disease
18. Biochemical aspects of the psychotic disorders
19. Biochemical basis of mental illness: Anxiety disorders; Mood disorders
20. Attention disorders; Schizophrenia

Suggested Books:

1. Brady, Basic Neurochemistry (8th Edition) Academic Press, 2012
2. Squire, Fundamental Neuroscience (4th Edition), Elsevier, 2013
3. Kandel, Principles of Neural Science (5th edition), McGraw Hill,2013
4. Duchene E. Haines, Fundamental Neuroscience for Basic & Clinical Applications (3rd Edition), Churchill Livingstone, 2006
5. Bear, Neuroscience-Exploring the Brain (3rd Edition), Lippincott, 2007

PRACTICAL-

Core Course (Lectures 10)	Maximum Practical Marks: 25
Time Allowed: 3 Hrs	External Marks: 20
Credits: 1	Internal Assessment: 5

1. Neurotoxicological studies using animal models
2. Study of developing rat cerebellar cortex: Normative and under exposure to toxic agents
3. Study of human pathological tissue from different pathological conditions
4. Visits to neurology and neurosurgery clinics
5. Histopathological methods for analysis of pathological tissues

DS: REGULATORY SYSTEMS

Discipline Specific Elective (Lectures 40)	Maximum Theory Marks: 75
Time Allowed: 3 Hrs	External Marks: 50
Credits: 3	Internal Assessment: 25

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I **Lectures: 10**

1. Chemical Control of Brain and Behaviour: Organizational Principles of Adult Hypothalamus Role of hypothalamus and pituitary hormones
2. The ANS in regulation of brain and behaviour
3. ANS Pharmacology- Transmitter and Receptor Coding,
4. Autonomic Controls of Homeostasis, Hierarchically Organized CNS Circuits
5. The diffuse modulatory systems of the brain: Locus coeruleus, raphe nucleus, substantia nigra, etc.

Unit-II **Lectures: 10**

6. Neural Control of the Breathing: Early Neuroscience and the Brainstem, Breathing & gas exchange, CNS & Breathing, Respiratory Rhythm Generation
7. Sensory Inputs and Altered Breathing, Modulation of Respiratory Motor Out-put,
8. Suprapontine structures and Breathing, Respiratory neurons and their discharge pattern
9. Cardiovascular System: Basics of Cardiovascular physiology, Sympathetic Vasomotor Tone,
10. Neural Control of Heart, Cardiovascular Homeostasis, The Nervous System and the Long-term control of the Cardiovascular System

Unit-III **Lectures: 10**

11. Anatomy and Physiology of the Brainstem regulatory Systems
12. Circadian Timing: Pineal and Circadian Rhythms, The Suprachiasmatic Nucleus, Light as the Dominant Stimulus
13. Circadian timings and reproduction, Heritability of Circadian Timings
14. Sex and behaviour: Neuronal basis of sexual behaviour, Sex Hormones and Brain, The Accessory Olfactory Pathway
15. Sleep and Dreaming: The two states of sleep- slow wave and rapid eye movement

Unit-IV **Lectures: 10**

16. Maternal Stimulation and Male Psychosexual Development. Why and how male and female brains differ?
17. Motivation & Reward: Neural Mechanisms of Motivation, Dopamine and Lateral Hypothalamic Syndrome, Reinforcement System
18. Brain Aversion Systems
19. Plasticity of nervous system
20. Addiction

Suggested Books:

1. Squire, Fundamental Neuroscience (4th Edition), Elsevier, 2013
2. Kandel, Principles of Neural Science (5th edition), McGraw Hill,2013

SEMINAR: **Credits: 2**

INTERNSHIP: **Credits: 4**

Semester-IV (Credits=22)

DISSERTATION: **Credits: 20**

Note: The students are required to take up a study in an aspect of neuroscience. A dissertation/ report has to be submitted at the time of examination. The work may be initiated at any point of time depending upon the capability of a student from earlier semesters as well. This is to provide a student real exposure to planning, execution and reporting of a research proposal.

(Semester III) MULTIDISCIPLINARY COURSE: NEUROCOGNITIVE SCIENCE

Multidisciplinary Course (Lectures 40)	Maximum Theory Marks: 75
Time Allowed: 3 Hrs	External Marks: 50
Credits: 3	Internal Assessment: 25

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I: Introduction to Brain and Cognition **Lectures: 10**

Basics of cognitive neuroscience; Brain structure and evolution; Brain development across the lifespan

Unit-II: Brain Functions and Perception **Lectures: 10**

Aging and cognitive disorders; Movement and motor system; Visual and spatial perception

Unit-III: Learning and Memory **Lectures: 10**

Types and models of memory; Learning processes in animals and humans; Brain areas involved in memory

Unit-IV: Higher Mental Functions **Lectures: 10**

Attention and focus; Language and communication; Decision-making and consciousness

Suggested books:

1. Squire, Fundamental Neuroscience (4th Edition), Elsevier, 2013
2. Kandel, Principles of Neural Science (5th edition), McGraw Hill,2013
3. Banich, Cognitive neuroscience (3rd Edition) Wordsworth, 2011
4. Gazzaniga, Cognitive Neuroscience (4th Edition) Norton, 2014

(Semester IV) MULTIDISCIPLINARY COURSE: *CLINICAL NEUROBIOLOGY*

Multidisciplinary Course (Lectures 40)	Maximum Theory Marks: 75
Time Allowed: 3 Hrs	External Marks: 50
Credits: 3	Internal Assessment: 25

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts andthe distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I Basics of Nerve and Muscle Disorders **Lectures: 10**

Nerve damage and myelin-related diseases; Muscular disorders like Duchenne Muscular Dystrophy; Genetic and nutritional diseases affecting the nervous system

Unit-II Brain Function and Chemical Imbalances **Lectures: 10**

Effects of alcohol and nutrient deficiencies on the brain; Brain disorders caused by metabolism issues; Brain chemicals (neurotransmitters) and how they relate to addiction and movement problems; Stroke, hypoxia, and seizures

Unit-III Aging and Brain Diseases **Lectures: 10**

Genetic brain diseases like Huntington's; Alzheimer's and Parkinson's disease; How the brain changes with age and how it leads to disease

Unit-IV Mental and Behavioral Disorders **Lectures: 10**

Disorders affecting movement (e.g., ALS), rare brain infections (prions); Chemical causes of mental health problems like anxiety, depression, and schizophrenia; Attention and mood disorders

Suggested Books:

1. Brady, Basic Neurochemistry (8th Edition) Academic Press, 2012
2. Squire, Fundamental Neuroscience (4th Edition), Elsevier, 2013
3. Kandel, Principles of Neural Science (5th edition), McGraw Hill,2013
4. Duchene E. Haines, Fundamental Neuroscience for Basic & Clinical Applications (3rd Edition), Churchill Livingstone, 2006
5. Bear, Neuroscience-Exploring the Brain (3rd Edition), Lippincott, 2007

(Semester III) VALUE ADDED COURSE: LEARNING AND MEMORY

Value Added Course (Lectures 28)	Maximum Theory Marks: 50
Time Allowed: 3 Hrs	External Marks: 35
Credits: 2	Internal Assessment: 15

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit I: Introduction to Learning and Memory **Lectures: 7**
What is learning? What is memory? ; Types of learning: Associative (classical & operant conditioning) vs. Non-associative (habituation & sensitization) ; Types of memory: Short-term, long-term, and working memory

Unit II: How the Brain Stores Memory **Lectures: 7**
Key brain areas: Hippocampus, amygdala, and cortex; Role of neurons and synapses in memory; The difference between implicit (unconscious) and explicit (conscious) memory

Unit III: Factors Affecting Learning and Memory **Lectures: 7**
Sleep and its role in memory formation; Effect of stress and emotions on memory; Importance of repetition and practice in learning

Unit IV: Memory Improvement and Disorders **Lectures: 7**
Simple techniques to boost memory (mnemonics, visualization, chunking); Forgetting: Why do we forget things?; Common memory disorders: Amnesia, Alzheimer's, and dementia

Suggested Books:

1. Mark A. Gluck, Eduardo Mercado, Catherine E. Myers – Learning and Memory: From Brain to Behavior
2. Eric R. Kandel – In Search of Memory: The Emergence of a New Science of Mind
3. Matthew Walker – Why We Sleep: Unlocking the Power of Sleep and Dreams
4. Daniel L. Schacter – The Seven Sins of Memory: How the Mind Forgets and Remembers
5. Larry R. Squire, Eric R. Kandel – Memory: From Mind to Molecules

(Semester III) SKILL ENHANCEMENT COURSE: SOFT SKILLS AND CAREER PREPARATION

Skill Enhancement Course (Lectures 28)	Maximum Theory Marks: 50
Time Allowed: 3 Hrs	External Marks: 35
Credits: 2	Internal Assessment: 15

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I: Emotional Intelligence & Interpersonal Skills **Lectures: 7**
Understanding emotional intelligence (EQ) and its relevance in research and teamwork; Building empathy and active listening; Conflict resolution and giving/receiving constructive feedback; Cultivating adaptability and resilience in challenging situations

Unit-II: Digital Literacy & Professional Tools **Lectures: 7**
Using LinkedIn and ResearchGate for networking and visibility; Creating e-portfolios and digital resumes; Managing virtual collaborations (Zoom, Google Workspace, Slack, etc.); Introduction to research tools (Google Scholar, PubMed, ORCID, SciHub responsibly)

Unit-III: Career Planning & Interview Skills **Lectures: 7** Resume/CV writing for research and industry roles; Statement of purpose (SOP) and cover letter writing; Interview preparation and mock interviews; Identifying career paths: academia, industry, data science, clinical research

Unit-IV: Professionalism, Ethics & Work Skills **Lectures: 7** Time management and productivity tools; Research and workplace ethics; Collaboration and leadership in labs and projects; Stress management and work-life balance

Suggested Books:

1. Daniel Goleman – Emotional Intelligence: Why It Can Matter More Than IQ
2. Cal Newport – Deep Work: Rules for Focused Success in a Distracted World
3. Dorie Clark – Reinventing You: Define Your Brand, Imagine Your Future
4. Richard Nelson Bolles – What Color Is Your Parachute? A Practical Manual for Job-Hunters and Career-Changers
5. Barbara Oakley – A Mind for Numbers: How to Excel at Math and Science