

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

2nd Semester

Subject Type	Course Name	Credit Points	Credit Distribution			Mode of Delivery			Proposed Moocs
			Theory	Practical	Tutorial	Offline	Online	Blended	
CC 3	Educational Psychology	6	5	0	1	✓			As per MAKAUT notification
BBS 201									
CC 4	Bio-Psychology	6	5	0	1	✓			
BBS 202									
GE 2	Students have to select from the GE Basket	6						✓	
AECC 2	Environmental Science	2	2	0	0	✓			
BBS 265									
Semester Credits		20							

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

CC3 BBS-201: Educational Psychology
Credits-5T+1L

Course Objective- The course is designed to prepare the students with the fundamentals of education psychology so that they are able to understand and apply theories and tools of intelligence, cognitive processes, neurodevelopmental interventions, thinking and decision making

Course Outcome:

Sl	Course Outcome (CO)	Mapped Module
CO1	Orientation to Educational Psychology and its core concept.	(M1) BL1
CO2	Understanding the basic theories of intelligence and tools used to assess intelligence.	(M2) BL1, BL2
CO3	Explain the concept of aptitude, ability and interest, understand their interrelationship and demonstrate tools in order to assess them.	(M3) BL1, BL2
CO4	Illustration of higher cognitive processes, mainly thinking, decision-making and problem-solving.	(M4) BL2
CO5	Classification of exceptional children, and illustration of educational strategies for the same.	(M5) BL1
CO6	Understanding the concept and different types of neurodevelopmental disorders.	(M6) BL2

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

Module Number	Content	Total Hours	%age of Questions	Covered CO	Covered PO	Blooms Level applicable	Remarks (if any)
Module 1	Introduction to Educational Psychology Basic concept, Introduction, History of Educational Psychology, Scope	4	10	1	1	BL1	N.A.
Module 2	Intelligence & Its Theories Definition, Nature, Classification Theories: Spearman, Thurstone, Guilford, Tests of Intelligence- Individual and group tests (Stanford-Binet test of intelligence, Wechsler scales), Culture-fair tests of intelligence	12	20	2	1	BL1, BL2	N.A.
Module 3	Aptitude, Ability & Interest Definition, Nature, Assessment, interconnection	8	15	3	1	BL1, BL2	N.A.
Module 4	Thinking, Decision-making, Problem-solving Thinking, Decision-making, Heuristics in decision-making: representativeness, availability and Anchoring and Adjustment, The Framing Effect, Overconfidence in decisions, The Hindsight Bias Problem-solving	10	15	4	1	BL2	N.A.
Module 5	Exceptional Children & Delinquency Classification: Gifted, Mental Retardation/ Intellectual Disability, Problem Children, Backward Children, Characteristics, Education of Different Classes of Exceptional Children	12	20	5	1	BL1	N.A.
Module 6	Neurodevelopmental Disorders Concept of Neurodevelopmental disorders, Introduction to features of Autism Spectrum Disorder, Attention Deficit hyperactivity disorder, Learning Disability & Communication disorders	12	20	6	1	BL2	N.A.
		58	100				

Syllabus:

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

Module 1- Introduction to Educational Psychology Basic concept, Introduction, History of Educational Psychology, Scope	(Total hours- 4)
Module 2- Intelligence & Its Theories Definition, Nature, Classification Theories: Spearman, Thurstone, Guilford, Tests of Intelligence- Individual and group tests (Stanford-Binet test of intelligence, Wechsler scales), Culture-fair tests of intelligence	(Total hours- 12)
Module 3- Aptitude, Ability & Interest Definition, Nature, Assessment, interconnection	(Total hours- 8)
Module 4- Thinking, Decision-making, Problem-solving Thinking, Decision-making, Heuristics in decision-making: representativeness, availability and Anchoring and Adjustment, The Framing Effect, Overconfidence in decisions, The Hindsight Bias Problem-solving	(Total hours- 10)
Module 5- Exceptional Children & Delinquency Classification: Gifted, Mental Retardation/ Intellectual Disability, Problem Children, Backward Children, Characteristics, Education of Different Classes of Exceptional Children	(Total hours- 12)
Module 6- Neurodevelopmental Disorders Concept of Neurodevelopmental disorders, Introduction to features of Autism Spectrum Disorder, Attention Deficit hyperactivity disorder, Learning Disability & Communication disorders	(Total hours- 12)

Reference:

- Morgan, C. T., King, R. A., Weisz, J. R., & Schopler, J. (2006). Introduction to Psychology, 7th eds.
- Mangal, S. K. (2002). Advanced educational psychology. PHI Learning Pvt. Ltd..
- Singh, A. K. (1986). *Tests, measurements and research methods in behavioural sciences*. Tata McGraw-Hill.
- Fredrickson, B., Loftus, G. R., Lutz, C., & Nolen-Hoeksema, S. (2014). *Atkinson and Hilgard's introduction to psychology*. Cengage Learning EMEA.
- Anastasi, A., & Urbina, S. (1997). *Psychological testing*. Prentice Hall/Pearson Education.
- American Psychiatric Association, & American Psychiatric Association. (2013). *DSM 5. American Psychiatric Association, 70*.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

CC4 BBS-202: Bio-Psychology
Credits- 5T+1L

Course Objective- The course is designed to prepare the students with the fundamentals of bio-psychology so that they are able to understand and apply theories and tools of various biological processes about learning, memorization, behaviors etc.

Course Outcome:

Sl	Course Outcome (CO)	Mapped Module
CO1	Orientation to Bio Psychology and biological basis, and its genetic assessment.	(M1) BL1
CO2	Understanding the nervous system and its functional components.	(M2) BL1, BL2
CO3	Detailed explanation of the basic biological units of psychology.	(M3) BL1, BL2
CO4	Detailed understanding of the structures and functions of the autonomic nervous system and peripheral nervous system, and the neurological determinants of behaviour.	(M4) BL2
CO5	Detailed interpretation of emotion in the light of physiological component and structure.	(M5) BL2
CO6	Understanding the concept of the neurological basis of learning and memorization process.	(M6) BL2

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

Syllabus with mapped module:

Module Number	Content	Total Hours	%age of Questions	Covered CO	Covered PO	Blooms Level applicable	Remarks (if any)
Module 1	Introduction to physiological psychology, History of physiological psychology, Genetic Endowment, Twin Studies	6	10	1	1	BL1	NA
Module 2	Structure & Function of Neurons, Neural Transmission, Nerve impulse, Synapse and neurotransmitters	12	25	2	1	BL1, BL2	NA
Module 3	Central Nervous System (Forebrain, mid brain, hind brain), Structure and function of Brain and Spinal Cord	12	25	3	1	BL1, BL2	NA
Module 4	Autonomic Nervous System – Structure and function, Peripheral nervous system – Structure and neural control of behaviour	6	10	4	1	BL2	NA
Module 5	Emotional behaviour: Physiological correlates of emotion. The role of cortex in emotion. Emotion and endocrine gland.	10	15	5	1	BL2	NA
Module 6	Neurophysiology of Learning and Memory	10	15	6	1	BL2	NA
Total		56	100				

Syllabus

Module 1- Introduction Introduction to physiological psychology, History of physiological psychology, Genetic Endowment, Twin Studies. <i>(Total Hours – 6)</i>
Module 2- Structure & Function of Neurons, Neural Transmission, Nerve impulse, Synapse and neurotransmitters <i>(Total Hours – 12)</i>
Module 3- Central Nervous System (Forebrain, mid brain, hind brain), Structure and function of Brain and Spinal Cord <i>(Total Hours – 12)</i>
Module 4- Autonomic Nervous System – Structure and function, Peripheral nervous system – Structure and neural control of behavior. <i>(Total Hours – 6)</i>

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

Module 5- Emotional behaviour: Physiological correlates of emotion. The role of cortex in emotion. Emotion and endocrine gland. (<i>Total Hours – 10</i>)
Module 6- Neurophysiology of Learning and Memory. (<i>Total Hours – 10</i>)

Reference

- Levinthal, C. F. (1990). *Introduction to physiological psychology* (3rd ed.). Prentice-Hall, Inc.
- Carlson, N. R. (2005). *Foundations of physiological psychology*. Pearson Education New Zealand.
- Schneider, A. M., & Tarshis, B. (1986). *An introduction to physiological psychology*. Random House.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

AECC 2- Environmental Science

Semester Credits- 2T

Course Objective: The course is designed to provide a working knowledge of environment, ecology and physical sciences for problem solving. The learner will be able to remember, understand and apply the taught concepts and methods involving social and environmental processes for betterment of environmental health and safety.

COURSE OUTCOMES (CO):

Sl	Course Outcome	Mapped modules
1	Be able to remember the basic concepts related to environment & ecology	M1,M2
2	Be able to remember & understand the scientific problem related to air, water, noise & land pollution	M1, M2
3	Be able to understand environmental laws , regulations , guidelines and n applying those for maintaining quality of environmental health and safety .	M1, M2,M3

Module Number	Content	Total Hours	%age of questions	Covered CO	Blooms Level
Module 1	Environmental Concepts	7	30%	1,2	L1
Module 2	Resources & Pollution	6	30%	2,3	L1, L2
Module 3	Environment Management	7	40%	1,2,3	L2,L3

SYLLABUS

Module 1: Environmental Concepts – Definition & basic concept of Environment & Ecology, man, society & environment, their interrelationship, Elements of ecology elements of ecology - species, population, community, definition of ecosystem- Structure & function of ecosystem (Bio geo chemical cycles, food chain, energy flow, ecological pyramid), Biodiversity & its threats and remedies. [7]

Module 2: Resources & Pollution – renewable & non-renewable resources, Bio-degradable and non-biodegradable pollutants, Sources & Effects of Pollution, Methods of Control (Air, Water, Land, & Noise)

Module 3: Environment Management - Concept & scope of environment Management, National environmental policy & Environmental Legislations in India, Environment Management System – ISO 14000, Environmental Audit, Eco mark, green Industry, Cases on Environment Impact Assessment.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. Behavioural Science & Applied Psychology
(Effective for 2020-2021 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2020-21

REFERENCES

Suggested Readings

1. N.K. Oberoi: Environmental Management, Excel Books
2. G.N. Pandey: Environmental Management, Vikas
3. K.M. Agrawal & P.K. Sikdar: Text Book of Environment, MacMillan
4. L.W. Canter: Environmental Impact Assessment, McGraw Hill
5. M.P. Poonia & S.C. Sharma, Environmental Studies, Khanna Publishing House (AICTE Recommended Textbook – 2018)
6. Masters, G. M., “Introduction to Environmental Engineering and Science”, Prentice-Hall of India Pvt. Ltd.,1991.
7. De, A. K., “Environmental Chemistry”, New Age International
8. Fundamentals of Ecology -Odum, E.P.
9. Instant notes on Ecology -Mackenzie, A., Ball, A.S. and Virdee, S.R. (1999) Viva Books
10. G. Dasmahapatra – Basic Environmental Engineering & Elementary Biology, Vikas Publication
11. Environmental Science, Cunningham, TMH
12. Environmental Pollution Control Engineering, C.S.Rao, New Age International
13. Environmental Science, Wright & Nebel, PHI
14. Environmental Pollution Analysis, S.M.Khopkar, New Age International