

Mahatma Education Society's  
**Pillai College of Arts, Commerce & Science (Autonomous)**

Affiliated to University of Mumbai

'NAAC Accredited 'A' grade (3 cycles)'  
'Best College Award' by University of Mumbai  
ISO 9001:2015 Certified



## **SYLLABUS**

**Program: B. Sc. Psychology**

**F.Y.B.Sc. Psychology**

**PCACS/PS/SYL/2024-25/FY**

**As per National Education Policy  
Choice Based Credit & Grading System**

**Academic Year 2024-25**

## **1. Introduction to B. Sc Psychology program**

In today's highly competitive and stressful world, the demand for psychological support is greater than ever. The relentless pursuit of success and the pressures of modern life have led to increased mental health challenges, making the presence of qualified psychologists and counselors essential across various domains. However, there exists a shortage of professionals in the field of psychology, compounded by a lack of awareness regarding the breadth of services it offers. To address this gap and attract more students to pursue psychology courses, it's crucial to adopt a dynamic and pragmatic instructional approach supported by an advanced curriculum. The relevance and application of psychological studies on human behavior and mental processes are extensively covered in the syllabus of the B.Sc. Psychology program.

The B.Sc. Psychology program spans three years, during which students delve into core subjects to establish a strong foundation in the fundamentals of psychology. In the final year, students have the opportunity to choose from a variety of elective courses and engage in research projects.

Psychologists are consistently sought after as valuable contributors to both academic research and various industries. The education sector, as well as research institutions, rely on this interdisciplinary-trained workforce to cultivate the next generation of leaders in psychology and related fields.

## 2. Programme Outcomes for B. Sc. Psychology Programme

Sr. No.	PO Title	POs in brief
<b>PO 1</b>	<b>Theoretical Knowledge</b>	Demonstrate strong theoretical background which they would be able to use in industry, hospitals, community and institutes or any other profession they would like to pursue.
<b>PO 2</b>	<b>Practical skills</b>	Demonstrate the knowledge to manipulate to create and manufacture various products that will help in diagnosis and treatment of disorders.
<b>PO 3</b>	<b>Planning Experiments</b>	Ability to design and conduct experiments, as well as to analyze and interpret scientific data.
<b>PO 4</b>	<b>Biosafety</b>	Demonstrate competency in laboratory safety and in routine and specialized laboratory skills applicable to research or clinical methods, including accurately reporting observations and analysis.
<b>PO 5</b>	<b>Communication</b>	Communicate scientific concepts, experimental results and analytical arguments clearly and concisely, both verbally and in writing and also ability to present their work through written, oral, and visual presentations, including an original research proposal
<b>PO 6</b>	<b>Ethics</b>	Awareness of the impact of solutions in a global, economic, environmental, and societal context and understanding of professional and ethical responsibilities.
<b>PO 7</b>	<b>Innovation</b>	Inculcate an attitude of enquiry towards developing innovative ability and enhancing entrepreneurship skills.
<b>PO 8</b>	<b>Life-long learning</b>	Interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments, recognition of the need for, being a better human being and an ability to engage in life-long learning.

## 1. Programme Specific Outcomes for B. Sc. Psychology Programme.

Sr. No	PSO Brief
<b>PSO-1</b>	Understanding of Psychological Principles: Graduates will demonstrate a comprehensive understanding of the core theories, concepts, and methodologies in psychology, including cognition, behavior, emotion, development, and social interactions.
<b>PSO-2</b>	Critical Thinking and Problem-Solving: Graduates will apply critical thinking skills to analyze and evaluate psychological theories, empirical research, and practical issues, devising innovative solutions to challenges encountered in clinical practice and organizational settings.
<b>PSO-3</b>	Ethical and Professional Competence: Graduates will be able to apply psychological principles and theories to real-world contexts, including clinical, educational, organizational, and social settings, demonstrating an understanding of the ethical implications of psychological practice.
<b>PSO-4</b>	Clinical Competence and Industrial Proficiency: Graduates will demonstrate comprehensive understanding, integrating clinical and industrial psychology minors, applying practical skills and interdisciplinary knowledge to promote mental health, organizational effectiveness, and cultural competence in diverse settings.

## Course Structure

Semester I						
Course Code	Course Type	Course Title	Theory/ Practical	Marks	Credits	Lectur es/ Week
PUSPS101	<b>Major</b>	General Psychology	Theory	100	3	4
PUSPS102	<b>Major</b>	Biopsychology	Theory	100	3	4
PUSPS103	<b>DISC Minor</b>	Developmental Psychology	Theory	100	3	4
PUSPS104	<b>SEC (FLIPPED CLASSRO OM)</b>	Psychology of Stress, Health and Well-being	Theory	100	2	2
PUSPS105P (PUSPS101 + PUSPS102)	<b>Practicals</b>	Applied Psychology Practical	Practicals	100	2	4
PUAEC101	<b>AEC</b>	Effective Communication Skills	Theory	100	2	3
PUVAC10	<b>VAC</b>	Human Values	Theory	100	2	3
PUIKS10	<b>IKS</b>	General IKS-I	Theory	100	2	3
PUIDC10	<b>IDC</b>	To be taken from the Pool	Theory	100	3	3
Total				900	22	30
All Subjects having Field Project as part of Continuous Assessment-2						

Semester II						
Course Code	Course Type	Course Title	Theory/ Practical	Marks	Credits	Lectur es/ Week
PUSPS201	<b>Major</b>	Cognitive Psychology	Theory	100	3	4
PUSPS202	<b>Major</b>	Behavioral Neuroscience	Theory	100	3	4
PUSPS203	<b>DISC Minor</b>	Lifespan Psychology	Theory	100	3	4
PUSPS204	<b>SEC (FLIPPED CLASSR OOM)</b>	Psychology of Emotion: Theory and Applications	Theory	100	2	2
PUSPS205P (PUSPS201+ PUSPS202)	<b>Practicals</b>	Cognitive Psychology Practicals	Practicals	100	2	4
PUAEC20	<b>AEC</b>	Indian Languages from the pool	Theory	100	2	3
PUVAC20	<b>VAC</b>	To be taken from the Pool	Theory	100	2	3
PUIKS20	<b>IKS</b>	General IKS-II	Theory	100	2	3
PUIDC20-	<b>IDC</b>	To be taken from the Pool	Theory	100	2	3
Total				900	22	30
All Subjects having Field Project as part of Continuous Assessment-2						

## Evaluation Pattern

Marking Code	Marking Scheme
A	60 Marks Final Exam, 20 Marks Internal Exam, 20 Marks Project.
B	100 Marks Practical Exam.
C	100 marks distributed within report /case study/ project/ presentation etc.

### Semester I

Course Code	Course Type	Course Title	Evaluation
PUSPS101	<b>Major</b>	General Psychology	A
PUSPS102	<b>Major</b>	Biopsychology	A
PUSPS103	<b>Discipline Minor</b>	Developmental Psychology	A
PUSPS104	<b>SEC (FLIPPED CLASSROOM)</b>	Psychology of Stress, Health and Well-being	C
PUSPS105P (PUSPS101 + PUSPS102)	<b>Practicals</b>	Applied Psychology Practical	B
PUAEC10	<b>AEC</b>	Effective Communication Skills	C
PUVAC10	<b>VAC</b>	Human Values	C
PUIKS10	<b>IKS</b>	General IKS-I	C
PUIDC10	<b>IDC</b>	To be taken from the Pool	C

## Semester II

Course Code	Course Type	Course Title	Evaluation
PUSPS201	<b>Major</b>	Cognitive Psychology	A
PUSPS202	<b>Major</b>	Behavioral Neuroscience	A
PUSPS203	<b>Discipline Minor</b>	Lifespan Psychology	A
PUSPS204	<b>SEC (FLIPPED CLASSROOM)</b>	Psychology of Emotion: Theory and Applications	C
PUSPS205P (PUSPS201 + PUSPS202)	<b>Practicals</b>	Cognitive Psychology Practicals	B
PUAEC20	<b>AEC</b>	Indian Languages from the pool	C
PUVAC20	<b>VAC</b>	To be taken from the Pool	C
PUIKS20	<b>IKS</b>	General IKS-II	C
PUIDC20-	<b>IDC</b>	To be taken from the Pool	C



# **SEMESTER I**

BOS	Biotechnology
Class	F. Y. B. Sc
Semester	I
Course Name	General Psychology
Course Code	PUSPS101
Type of Course	Major
Level of the Course	Basic
Total Credits for the Course	3

### Course Objectives:

1. To introduce students to the foundational principles, theories in psychology.
2. To develop students' critical thinking skills in understanding various personality and intelligence theories.

Unit No.	Name of Unit	Topic No.	Name of Topic	Hours
I	Introduction to Psychology	1.1	History of Psychology, Nature, scope and definition of Psychology,, different approaches in psychology, careers in psychology, Ethics of psychology, Methods used in Psychological research, ethics in psychological research	15
		1.2	Biology of mind: Structure and function of neurons, neural communication & neurotransmitters, nervous & endocrine system, structure & function of the brain, methods of studying the brain	
		1.3	Learning theory: classical & operant conditioning, Learning through observation	
II	Personality, Intelligence &	2.1	Different approaches to study personality: psychodynamic, Behavioural, social-cognitive, Humanism, Trait theories, trait theories & social cognitive theories, self	15

	Language		esteem and self serving bias, Assessments in personality	
		2.2	Defining intelligence, theories of intelligence, social & emotional intelligence, creativity	
		2.3	Levels of language analysis: structure & development, Brain & language, language & thought	
III	Motivation & Emotions	3.1	Concepts in motivations: drives, instincts, motives, optimum arousal; Theories of Motivation	15
		3.2	Emotions: Biological basis, Theories of Emotion	
		3.3	Stress: Basic Concepts, stress & illness, Stress & Health : GAD syndrome, immune system, health psychology, cognitive factors, personality & stress, Coping with stress	
IV	Introduction to Health Regimen (IKS)	4.1	Understanding Swastha vritta, the healthy regimen to maintain state of wellbeing Dinacharya, the Daily regimen including Daily detoxification, exercise, Intake of Food, Water, Air and Sunlight, work and ergonomics, Rest and sleep hygiene.	15
		4.2	Ritu charya, the seasonal regimen, Sadvritta and the concept of social wellbeing, understanding trividha upastambhas, three pillars to health.	
		4.3	Concept of Shadrasa in choosing appropriate nourishment to the body and mind. Definition, Meaning and objectives of Yoga, Relevance of yoga in modern age. Brief Introduction of Hatha yoga, Raja yoga, Karma yoga.	
<b>TOTAL LECTURE</b>				<b>60</b>

**Course outcomes:** By the end of the course the student will be able to:

1. Understand the historical development, scope, and various approaches in psychology.
2. Demonstrate knowledge of biological processes underlying behavior, including neural communication and brain function.
3. Analyze theories of personality, intelligence, and language, and their implications for understanding human behavior.
4. Evaluate different motivational theories and their applications in real-life contexts.
5. Examine the biological basis and psychological theories of emotion, stress, and coping mechanisms.
6. Apply principles of health psychology to promote well-being through daily regimens, nutrition, and stress management techniques.

**Reference Books:**

1. Barlow, D. H., & Durand, V. M. (2015). Abnormal psychology: An integrative approach. Cengage Learning.
2. Nevid, J. S., & Rathus, S. A. (2015). Psychology and the challenges of life: Adjustment and growth (12th ed.). John Wiley & Sons.
3. Sue, D. W., Sue, D., & Sue, S. (2015). Understanding abnormal behavior. Cengage Learning.
4. Ciccarelli, S.K., White, J.N. & Misra, G. (2018). Psychology: South Asian Edition. New Delhi: Pearson Education.
5. Myers, D. G. (2013). Psychology. 10th edition; International edition. New York: Worth Palgrave Macmillan, Indian reprint 2013
6. Baron, R. & Misra. G. (2013). Psychology. Pearson Education India
7. Morgan, King, Weisz, Scopler (2017). Introduction to Psychology, McGraw Hill Education; 17 edition.
8. Introduction to Psychology: Jain, Shashi, Kalyani Publishers, (2014) Fourth edition, Paperback, ASIN: B014UO1YQA
9. Dr Deepak Chopra, Perfect Health--Revised and Updated: The Complete Mind Body Guide, Harmony publication, 2001.
10. Vasant lad, Ayurveda, the Science of Self-healing: A Practical Guide: Science of Selfhealing, lotus press, 1984.

**Case Study:**

<b>I</b>	The true nature of intelligence is that its distribution is not equal among all human beings. It is a normal distribution that is governed by a definite principle which states that the majority of people are average, a few are very bright and a few are very dull. Wide individual differences exist among individuals with regard to intelligence. No two individuals, even identical twins or individuals' nurtured in identical environments, are bestowed with
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	<p>equal mental energy. It is possible to observe the intelligence of an individual only to the extent that it is manifested by the person in one or more intelligence tests. Many such tests have been devised by Psychologists for the measurement of intelligence. In reference to these, however, the term 'assessment' is preferred because, intelligence being only a concept or an abstraction rather than a substance, it cannot be measured in physical units like a length of cloth or temperature of the body.</p>
<b>II</b>	<p>Riya, a 32-year-old marketing executive, resides in Mumbai, one of India's bustling metropolises. She juggles a demanding job, a busy household, and caring for her elderly parents. Lately, Riya has been experiencing persistent headaches, irritability, and difficulty sleeping. She often feels overwhelmed by her responsibilities and finds it challenging to relax, even during her limited leisure time.</p> <p>Riya's stress seems to stem from various sources. Firstly, her job demands long hours and frequent travel, leaving her with little time for self-care. Secondly, she feels the pressure of managing her parents' health issues while also meeting the expectations of her extended family. Additionally, Mumbai's fast-paced lifestyle and congested traffic exacerbate her daily stressors.</p> <p>Riya's motivation to excel in her career and care for her family drives her actions. However, the constant pressure and lack of downtime have led to emotional strain. She experiences a mix of emotions, including frustration, guilt for not meeting everyone's needs, and anxiety about her own well-being.</p>

BOS	Biotechnology
Class	F. Y. B. Sc
Semester	I
Course Name	Biopsychology
Course Code	PUSPS102
Type of Course	Major
Level of the Course	Basic
Total Credits for the Course	3

**Course Objectives:**

1. To introduce students to the fundamental concepts, theories, and research methods in biopsychology.
2. To develop students' critical thinking skills in evaluating psychological theories from a biological perspective.

Unit No.	Name of Unit	Topic No.	Name of Topic	Hours
I	Foundations of Biological Psychology	1.1	What is Biopsychology, What is Biopsychology? Approaches to relate brain and behavior, relation between Biopsychology and the other disciplines. Divisions of Biopsychology;	15
		1.2	Foundations of Biopsychology: Evolution of the Human Brain,; Ethical issues in research with animals; careers in neuroscience.	
		1.3	Research methods: experimental ablation, recording and stimulating neural activity, neurochemical methods, genetic methods	
II	Nervous system and the brain	2.1	Layout of the nervous system: divisions of the nervous, anatomical directions, blood brain barrier, meninges, ventricular system & CSF	15
		2.2	Cells of the nervous system: structure & function of neurons, supporting cells	

		2.3	Structure & function of the CNS & PNS	
III	Neural communication	3.1	Communication within the neuron: resting membrane potential, postsynaptic potentials, Action potentials	15
		3.2	Process of synaptic transmission	
		3.3	Neurotransmitters & Pharmacology of synaptic transmission & behavior	
IV	Biopsychology of emotions, & Neuroplasticity in adults	4.1	Biopsychology of emotions: early theories, emotions & ANS, emotions & facial expressions	15
		4.2	Fear, defense & aggression, neural mechanisms of fear conditioning, brain & human emotions, Stress & Health	
		4.3	Neuroplasticity in adults : neurogenesis in adult mammals, Effects of Experience on the Reorganization of the Adult Cortex, Williams syndrome	
<b>TOTAL LECTURE</b>				<b>60</b>

**Course outcomes:** On completion of the course, they will be able to:

1. Describe the basic principles and major theories in biological psychology.
2. Analyze the structure and function of the nervous system, neurotransmitter systems, and their role in behavior and mental health.
3. Evaluate the methods and techniques used in biological psychology research, including brain imaging, neurochemistry, and genetics.
4. Explain the neural mechanisms underlying, emotion, stress & aggression.
5. Investigate Neuroplasticity in Cognitive and Emotional Aging.
6. Examine Neurobiological Mechanisms Underlying Emotional Disorders.

**References:**

1. Carlson, N. R. (2018). *Physiology of behavior* (12th ed.). Pearson.
2. Kalat, J. W. (2019). *Biological psychology* (13th ed.). Cengage Learning.
3. Pinel, J. P. J. (2018). *Biopsychology* (10th ed.). Pearson.
4. Bear, M. F., Connors, B. W., & Paradiso, M. A. (2016). *Neuroscience: Exploring the brain* (4th ed.). Lippincott Williams & Wilkins.
5. Nestler, E. J., Hyman, S. E., & Malenka, R. C. (2015). *Molecular neuropharmacology: A foundation for clinical neuroscience* (3rd ed.). McGraw-Hill Education.
6. Plomin, R., DeFries, J. C., Knopik, V. S., & Neiderhiser, J. M. (2016). *Behavioral genetics* (7th ed.). Worth Publishers.

## Case Study:

<b>I</b>	<p>Williams syndrome Reference: Hepburn S, Philofsky A, John A, Fidler DJ. A Case Study of Early Development in Williams Syndrome: Implications for Early Intervention. <i>Infants Young Child</i>. 2005 Jul-Sep;18(3):234-244. doi: 10.1097/00001163-200507000-00007. PMID: 26224992; PMCID: PMC4516035.</p> <p>Jenny (fictitious name), a 38-month-old girl, was referred to a research study on early development in Williams syndrome through a local pediatrician. Diagnosis was made via FISH (Fluorescent In Situ Hybridization) testing 2 months prior to referral. She is the first-born child of a married couple, lives at home, and is receiving home-based and center-based intervention. Prior to her involvement in this research study, Jenny had not participated in any standardized tests of her development.</p> <p>Described by her parents as a healthy child, Jenny was born at 40 weeks' gestation, following an uncomplicated pregnancy and delivery. She was a small infant (weight and height both within the 5th percentile). A heart murmur was detected, requiring monitoring, but no treatment. She breast-fed very well, although she was described as "finicky" with regard to prepared formula. She had no significant history of illnesses and was on no medications.</p> <p>Her parents first became concerned about Jenny's development around the age of 15 months, when they noticed that her physical development was "slow." She rolled over at 7 months, sat alone without support at approximately 8 months, crawled at 11 months, and walked at 22 months. Jenny also seemed withdrawn from interactions with other children and would watch them play instead of joining. Despite this social reticence with other children, they also observed hypersociability with adults (eg, overly friendly style, lack of discrimination of familiar vs unfamiliar).</p> <p>Language development was reported to be somewhat delayed. First words were reported to be emerging at 18 months, however; while she was babbling and directing her vocalizations to adults frequently, she was sometimes difficult to understand and tended to intermingle babble with true words. Subsequent to her use of first words, language development was reported to happen slowly. An observational evaluation at the age of 34 months suggested a profile of stronger expressive (approximately 27 months) than receptive language (scattered abilities between 18 and 27 months). At that time, echolalia predominated Jenny's expression; however, spontaneous phrase speech was newly emerging.</p> <p>Jenny's parents described her as curious and happy most of the time. Disciplining Jenny is difficult for them, partly because she laughs when she is being reprimanded.</p>
<b>II</b>	<p>SM is a woman without fear. She doesn't feel it. She has been held at knifepoint without a tinge of panic. She'll happily handle live snakes and spiders, even though she claims not to like them. She can sit through reels of upsetting footage without a single start. And all because a pair of almond-shaped structures in her brain – amygdalae – have been destroyed. Ralph Adolphs, Antonio Damasio and Daniel</p>



Tranel at the University of Iowa have been working with SM for over a decade. She is a 44-year old mother-of-three, who suffers from a rare genetic condition called Urbach-Wiethe disease, which has caused parts of her brain to harden and waste away. This creeping damage has completely destroyed her amygdala, a part of the brain involved in processing emotion. Even so, her IQ is normal. Her memory is good, as are her language and perception skills. But she has problems dealing with fear. Way back in 1994, the group showed that SM has trouble recognising fear in other people. She can't tell what fearful facial expressions mean, even though she's more than capable of discerning other emotions. Even though she's a talented artist, she can't draw a scared face, once claiming that she didn't know what such a face would look like. Now, in a study led by Justin Feinstein, the team have found that SM cannot feel fear either.

During her visit to Waverley Hills, SM rated her level of fear throughout the experience. She said that she was excited and enthusiastic in the same way that she feels when she rides a rollercoaster, but never scared – her scores always stayed at zero. In a similar trip to an exotic pet store, her levels of fear never climbed over a score of 2 out of 10. Even though she claimed to “hate” snakes and spiders, she was drawn to the snake enclosure, was excited about holding a serpent (“This is so cool!”) and had to be told not to touch or poke the bigger, more dangerous snakes (and a nearby tarantula). Why? She was overcome with “curiosity”.

BOS	Biotechnology
Class	F. Y. B. Sc Psychology
Semester	I
Course Name	Developmental Psychology
Course Code	PUSPS103
Type of Course	Discipline Minor
Level of the Course	Basic
Total Credits for the Course	3

**Course Objectives:**

1. To impart knowledge and understanding of the basic concepts, principles, perspectives and modern trends in Developmental Psychology
2. To foster interest in Developmental Psychology as a field of study and research

Unit No.	Name of Unit	Topic No.	Name of Topic	Hours
I	Introduction to developmental psychology	1.1	An Orientation to Lifespan Development, Key Issues and Questions: Determining the Nature and Nurture of Lifespan Development; theoretical perspectives & research methods	15
		1.2	Prenatal development: Earliest development: genes & chromosomes, genetics, interaction of hereditary & environment; Prenatal growth & change: fertilisation, stages of prenatal growth, pregnancy problems, ethical issues, prenatal environment	

		1.3	Birth, birth complications & the new born child	
II	Infancy	2.1	Physical development in infancy: Growth & stability, sensory & Motor development	15
		2.2	Cognitive development: piaget approach, information processing approach, language development	
		2.3	Social & personality development in Infancy	
III	Preschool years	3.1	Physical development in preschool years: growing body, brain & motor development	15
		3.2	Cognitive development & Language	
		3.3	Social and personality development: sense of self, social circle & family, Moral development	
IV	Middle - childhood Development	4.1	Physical development: growing body & motor development, psychological disorders & children with special needs	15
		4.2	Intellectual development: approaches by piaget, information processing approach, vygotskys approach and language development	
		4.3	Developing self: psychosocial development, sense of self, self esteem & moral development; Relationships: stages of friendships, social status among peers, gender & friendship	
<b>TOTAL LECTURE</b>				<b>60</b>

**Course outcomes:** On completion of the course, they will be able to:

1. Understand the complexities of lifespan development, including the interplay between nature and nurture, through theoretical perspectives and research methodologies.

2. Demonstrate knowledge of prenatal development stages, genetics, and environmental influences, while recognizing ethical considerations in research and practice.
3. Evaluate physical, cognitive, and social milestones achieved during infancy, including sensory-motor skills and language acquisition.
4. Analyze physical, cognitive, and socioemotional development during the preschool years, emphasizing language acquisition, self-concept formation, and moral development.
5. Assess physical, cognitive, and psychosocial changes during middle childhood, including motor development, cognitive theories, and the formation of friendships and self-esteem.
6. Explain the physical, cognitive and social developmental from infancy to middle childhood years.

**Reference Books:**

1. Feldman, R. S. (2009). *Development Across The Lifespan*, 8 th edition (2018)
2. Berk, L. E. (2006). *Child Development*. (7th Ed). New Delhi: Pearson Education Dorling Kindersley (India) pvt ltd.
3. Berk, L. E. (2004). *Development through the lifespan*. (3rd Ed). New Delhi: Pearson Education Dorling Kindersley (India) pvt ltd.
4. Cook, J. L., & Cook, G. (2009). *Child Development: Principles and Perspectives*. Boston: Pearson Education
5. Crandell, T. L., Crandell, C. H., & Zanden, J. W. V. (2009). *Human Development*. (9th Ed). New York: McGraw Hill co. Inc.
6. Dacey, J. S. & Travers, J. F. (2004). *Human Development across the lifespan*. (5th Ed). McGraw Hill co.
7. Kail, R. V. (2007). *Children and their Development*. (4th Ed). New Jersey: Pearson Education Inc.
8. McDevitt, T. M., & Omrod, J. E. (2007). *Child Development and Education*. (3rd Ed). New Jersey: Pearson Education Inc.
9. Papalia, D. E., Olds, S. W., & Feldman, R. (2004). *Human Development*. (9th Ed). McGraw Hill, international Edition
10. Shaffer, D. R., & Kipp, K. (2007). *Developmental Psychology: Childhood and Adolescence*. (7th Ed). Thomson Learning, Indian reprint 2007

**Case Study:**

<b>I</b>	Thalidomide was a widely used drug in the late 1950s and early 1960s for the treatment of nausea in pregnant women. It became apparent in the 1960s that thalidomide treatment resulted in severe birth defects in thousands of children. Though the use of thalidomide was banned in most countries at that time, thalidomide proved to be a useful treatment for leprosy and later, multiple
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	<p>myeloma. In rural areas of the world that lack extensive medical surveillance initiatives, thalidomide treatment of pregnant women with leprosy has continued to cause malformations. Research on thalidomide mechanisms of action is leading to a better understanding of molecular targets. With an improved understanding of these molecular targets, safer drugs may be designed. The thalidomide tragedy marked a turning point in toxicity testing, as it prompted United States and international regulatory agencies to develop systematic toxicity testing protocols; the use of thalidomide as a tool in developmental biology led to important discoveries in the biochemical pathways of limb development. In celebration of the Society of Toxicology's 50th Anniversary, which coincides with the 50th anniversary of the withdrawal of thalidomide from the market, it is appropriate to revisit the lessons learned from the thalidomide tragedy of the 1960s.</p>
<b>II</b>	<p>SON March 9, 1863, Dr David Cheever, Adjunct Professor of Clinical Surgery at the Harvard Medical School, presented the following case report of the sudden infant death syndrome at a meeting of the Boston Society for Medical Improvement.<sup>1</sup> His report is one of the earliest descriptions of this syndrome in the American medical literature. An infant, 10 weeks old, apparently in perfect health, suddenly died while sleeping, and after having been asleep one and a half hours. There had been no struggle, and the face was not livid. On post-mortem examination, Dr C. found no morbid appearances, except some serous effusion in the ventricles and at the base of the brain; the latter organ was also somewhat congested. The thoracic organs were all healthy, and the larynx free of obstruction. An infant cousin of the child had died in a precisely similar manner. Dr C. was unable to account for the death, unless the effusion might possibly have been accumulating insidiously for some time until it became sufficient to destroy life.</p>

# Practicals

Course Code	Title	Credits
<p><b>PUSPS105P</b> (PUSPS101+ PUSPS102) <b>APPLIED PSYCHOLOGY PRACTICAL</b></p>	<ol style="list-style-type: none"> <li>1. Conducting an in - depth case history of a fellow classmate &amp; submission of the same at term end in the form of a case study</li> <li>2. Demonstrating in practice, the different reinforcements &amp; punishments in operant conditioning</li> <li>3. Assessing emotional intelligence using a scale &amp; scoring &amp; report writing of the same</li> <li>4. Create a timeline of lifespan development events and milestones of the self</li> <li>5. Assignment: Write a reflective essay discussing the interplay between nature and nurture in shaping human development.</li> <li>6. Research &amp; Presentation of a Historical Figure in Psychology</li> <li>7. Maintenance of a stress Diary for 15 days: with prompts on stressors, coping strategies, a reflective discussion on the same after 15 days</li> <li>8. Conducting a session on JPMR muscle relaxation in class, and a video submission by students conducting the same on a subject (following the script provided)</li> </ol>	<p style="text-align: center;">2</p>

# **SEMESTER II**

BOS	Biotechnology
Class	F. Y. B. Sc Psychology
Semester	II
Course Name	Cognitive Psychology
Course Code	PUSPS201
Type of Course	Major
Level of the Course	Basic
Total Credits for the Course	3

**Course Objectives:**

1. To introduce students to the fundamental concepts, theories, and research in cognitive psychology.
2. To develop students' critical thinking skills in evaluating psychological theories and applying psychological principles to real-world situations

Unit No.	Name of Unit	Topic No.	Name of Topic	Hours
I	Perception & Attention	1.1	Process of Visual perception, approaches to perception (bottom - up & top down, gestalt, marris), face perception, direct perception.	15
		1.2	Selective attention theories, divided attention theories, Effect of practice, Controlling attention	
		1.3	Deficits in perception, neural underpinnings of attention	
II	Memory & Memory processes	2.1	Traditional approaches to study memory, Working memory, executive function, Aspects & subdivisions of long term memory	15



		2.2	Levels of processing approach, Reconstructive nature of Memory & Amnesia.	
		2.3	Models for organizing knowledge, approaches to concept formation & categorisation & Codes in Long term memory.	
III	Thinking & Reasoning	3.1	Definition of thinking & problem solving, different approaches to problem solving, blocks in problem solving	15
		3.2	The Problem Space Hypothesis, Expert Systems, Creative Solutions: Unconscious Processing and Incubation, Critical Thinking	
		3.3	Types of reasoning: deductive & inductive reasoning, process of decision making, cognitive illusions in decision making, Utility & descriptive models of decision making	
IV	Introduction to Indian Psychology	4.1	Concept of Manas in Ayurveda and understanding Mind Body harmony, Triguna based Psychology in Ayurveda and Yoga	15
		4.2	Influence of Tri dosha on Mind, Mind body intellect and consciousness complex, Understanding Consciousness and solution to issues within the Human Mind.	
		4.3	Looking at the world through the lenses of Dravya, Guna and Karma Applying the principle of Samanya and Vishesha in every aspect of life to achieve perfect health.	
<b>TOTAL LECTURE</b>				<b>60</b>

**Course outcomes:** By the end of the course the student will be able to:

1. Gain insight into visual perception processes and attention mechanisms, including theories and neural underpinnings.
2. Understand memory processes from sensory to long-term memory, including retrieval and the reconstructive nature of memory.
3. Explore memory storage models, concept formation, and the role of imagery in cognitive processes.
4. Develop problem-solving skills and critical thinking abilities, utilizing various approaches to tackle cognitive blocks.
5. Analyze different types of reasoning, decision-making processes, and cognitive biases influencing decision-making in real-world contexts.
6. Understanding the influence of external environment on internal health and ways to synchronize our body and mind with nature to ensure smooth functioning of all organ systems of our body.

**Reference Books:**

1. Ashcraft, M. H. & Radvansky, G. A. (2009). *Cognition*. (5th ed), Prentice Hall, Pearson education
2. Francis, G., Neath, I., & VanHorn, D. (2008). *Coglab 2.0 on a CD*. Wadsworth Cengage Learning, international student edition
3. Galotti, K.M. (2018). *Cognitive Psychology: In and Out of the Laboratory*. (6th ed.). Sage Publications
4. Goldstein, E. B. (2007). *Psychology of sensation and perception*. New Delhi: Cengage learning India, Indian reprint 2008
5. Matlin, M.W. (2013). *Cognitive Psychology*, 8th ed., international student version, John Wiley & sons
6. Reed, S. K. (2004). *Cognition: Theory and Applications*. (6th ed.), Wadsworth/ Thomson Learning
7. Robinson-Riegler, B., & Robinson-Riegler, G. L. (2008). *Cognitive Psychology – Applying the science of the Mind*. (2nd ed.). Pearson Education. New Delhi: Indian edition by Dorling Kindersley India pvt ltd.
8. Srinivasan, N., Gupta, A.K., & Pandey, J. (Eds). (2008). *Advances in Cognitive Science*. Volume 1, New Delhi, Sage publications
9. Sternberg, R.J. (2009). *Applied Cognitive Psychology: Perceiving, Learning, and Remembering*. New Delhi: Cengage learning India, Indian reprint 2009
10. Solso, R.L., Maclin, O.H., & Maclin, M.K. (2013). *Cognitive Psychology*. Pearson education, New Delhi, first Indian reprint 2014
11. Surprenant, A.M., Francis, G., & Neath, I. (2005). *Coglab Reader*. Thomson Wadsworth
12. BKS Iyengar, *Light on Yoga: The Classic Guide to Yoga by the World's Foremost Authority*, thronson publication, 2006
13. Swamy Satyananda Saraswati, *Asana, Pranayama, Mudra and Bandha*, Bihar School of Yoga, 2002

## Case Study:

<b>I</b>	<p>Exposure to ‘fake news’ can result in false memories, with possible consequences for downstream behaviour. Given the sharp rise in online misinformation during the coronavirus pandemic, it is important to understand the factors that influence the development of false memories. The present study measured susceptibility to false memories following exposure to fabricated news stories about the pandemic in a sample of 3746 participants. We investigated the effect of individual differences in (1) knowledge about COVID-19, (2) engagement with media or discussion about the coronavirus, (3) anxiety about COVID-19 and (4) analytical reasoning. Notably, objectively and subjectively assessed knowledge about COVID-19 were not significantly correlated. Objectively assessed knowledge was associated with fewer false memories but more true memories, suggesting a true discrimination between true and fake news. In contrast, participants who merely believed themselves to be very knowledgeable were more likely to report a memory for true stories, but showed no reduction in false memories. Similarly, individuals who reported high levels of media engagement or anxiety about COVID-19 reported an increase in true (but not false) memories. Finally, higher levels of analytical reasoning were associated with fewer memories for both true and fabricated stories, suggesting a stricter threshold for reporting a memory for any story. These data indicate that false memories can form in response to fake COVID-19 news and that susceptibility to this misinformation is affected by the individual’s knowledge about and interaction with COVID-19 information, as well as their tendency to think critically</p>
<b>II</b>	<p>Anchal is a 20-year-old college student pursuing a degree in economics at a prestigious university in India. She comes from a middle-class family in a small town and is the first in her family to attend college. Anchal has always been ambitious and hardworking, but she is facing several cognitive challenges that are impacting her academic performance.</p> <p>Despite studying diligently for her exams, Anchal struggles to retain information over the long term. She finds it difficult to recall key concepts and theories during exams, which has led to lower grades than she expects. Anchal’s family places high expectations on her academic success, adding to the pressure she feels to perform well.</p> <p>Anchal encounters various challenges in her problem-solving abilities, particularly in her mathematics and statistics courses. She often feels overwhelmed by complex problem sets and struggles to break them down into manageable steps. Anchal’s lack of confidence in her math skills further exacerbates her difficulties, leading to frustration and self-doubt.</p> <p>As Anchal approaches graduation, she faces the daunting task of choosing a career path. However, she feels overwhelmed by the multitude of options available and is unsure of which path to pursue. Anchal’s decision-making process is further complicated by cultural expectations and societal pressures to pursue a stable and lucrative career, such as engineering or medicine.</p>

BOS	Biotechnology
Class	F. Y. B. Sc Psychology
Semester	II
Course Name	Behavioral Neuroscience
Course Code	PUSPS202
Type of Course	Major
Level of the Course	Basic
Total Credits for the Course	3

**Course Objectives:**

1. To introduce students to the fundamental concepts, theories, and research methods in biopsychology.
2. To develop students' critical thinking skills in evaluating psychological theories from a biological perspective.

Unit No.	Name of Unit	Topic No.	Name of Topic	Hours
I	Sensory & motor Systems	1.1	Visual system: structure & function of the eye, brain regions involved in visual processing, perception of colour, form, spatial location, orientation & movement	15
		1.2	Auditory system, vestibular system, somatosenses, gustation & olfaction	
		1.3	Motor systems: skeletal muscles, spinal code functions, brain functions complex motor behaviors, deficits associated with motor system	
II	Biopsychology of Motivation	2.1	Hunger & eating: digestion & energy storage, theories of hunger & thirst,	15

			process of eating, brain mechanisms, Disorders of eating	
		2.2	Sleeping, dreaming & circadian rhythm: Stages of sleep, brain activity during sleep, theories of sleep, physiological & neural mechanisms of sleeping & waking, disorders of sleep, concept of dreaming, biological clocks	
		2.3	Reproductive behavior: neuroendocrine system, sexual development & hormones, neural & brain mechanisms of sexual behavior, sexual orientation	
III	Learning, memory & communication & neurological disorders	3.1	Learning & memory: types of learning & memory, Stimulus response learning, motor learning, perceptual learning, relational learning & Amnesia	15
		3.2	Language production & comprehension, disorders of language production & comprehension, Disorders of reading & writing,	
		3.3	Neurological disorders: tumors & seizures, accidents, brain injury, disorders of development, defenerative disorders, infectious diseases	
IV	Psychiatric disordered & substance abuse	4.1	Schizophrenia & affective disorders	15
		4.2	Depression, Anxiety disorders, Bipolar disorder, Developmental disorders : Autism spectrum, ADHD	

		4.3	Drugs & substance abuse disorders: Basic features of drug action, role of learning, commonly used drugs & treatment for substance abuse	
<b>TOTAL LECTURE</b>				<b>60</b>

**Course outcomes:** By the end of the course the student will be able to:

1. Gain comprehensive knowledge of sensory and motor systems, including vision, audition, and motor functions.
2. Understand the biopsychology of motivation, covering hunger, sleep, reproductive behavior, and associated disorders.
3. Analyze learning, memory, communication processes, and neurological disorders such as tumors and degenerative diseases.
4. Explore psychiatric disorders including schizophrenia, depression, anxiety, and substance abuse disorders.
5. Develop an understanding of language disorders, developmental disorders, and their neurological bases.
6. Acquire insight into commonly used drugs, their effects, and treatment approaches for substance abuse.

**Reference Books:**

1. Carlson, N. R. (2018). Physiology of behavior (12th ed.). Pearson.
2. Kalat, J. W. (2019). Biological psychology (13th ed.). Cengage Learning.
3. Pinel, J. P. J. (2018). Biopsychology (10th ed.). Pearson.
4. Bear, M. F., Connors, B. W., & Paradiso, M. A. (2016). Neuroscience: Exploring the brain (4th ed.). Lippincott Williams & Wilkins.
5. Nestler, E. J., Hyman, S. E., & Malenka, R. C. (2015). Molecular neuropharmacology: A foundation for clinical neuroscience (3rd ed.). McGraw-Hill Education.
6. Plomin, R., DeFries, J. C., Knopik, V. S., & Neiderhiser, J. M. (2016). Behavioral genetics (7th ed.). Worth Publishers.

**Case Study:**

<b>I</b>	Autism spectrum disorder (ASD) is a developmental disability caused by differences in the brain. People with ASD often have problems with social communication and interaction, and restricted or repetitive behaviors or interests. People with ASD may also have different ways of learning, moving, or paying attention. About 1 in 36 children has been identified with autism spectrum disorder
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	<p>(ASD). About 1 in 6 (17%) children aged 3–17 years were diagnosed with a developmental disability – these include autism, attention-deficit/hyperactivity disorder, blindness, and cerebral palsy, among others.</p>
<b>II</b>	<p>Acute Motor Sensory Axonal Neuropathy (AMSAN) is a rare and severe variant of Guillain-Barré syndrome (GBS) that has a prolonged recovery course. GBS is often suspected due to ascending muscle weakness, sensation difficulties, respiratory compromise, and antecedent diarrhea. The diagnosis of GBS is supported by cerebrospinal fluid analysis showing albuminocytologic dissociation. Electromyogram and nerve conduction study confirm the diagnosis and allow for further classification by variant. Treatment involves either IV immune globulins or plasmapheresis, and patients typically recover. However, depending on the variant and severity, patients may ultimately require prolonged mechanical ventilation with tracheostomy. In these cases, they may continue to have persistent muscle and sensation abnormalities requiring long-term care. We present a unique case of a 38-year-old female patient with decade-long use of lithium for bipolar disorder that presented with acute lithium toxicity. Though she was ultimately diagnosed with AMSAN, the Syndrome of Irreversible Lithium-Effectuated Neurotoxicity (SILENT) may have also contributed to her persistent neurological sequelae.</p>

BOS	Biotechnology
Class	F. Y. B. Sc Psychology
Semester	II
Course Name	Lifespan Psychology
Course Code	PUSPS203
Type of Course	Discipline Minor
Level of the Course	Basic
Total Credits for the Course	3

**Course Objectives:**

1. To impart knowledge and understanding of the basic concepts, principles, perspectives and modern trends in Developmental Psychology
2. To foster interest in Developmental Psychology as a field of study and research

Unit No.	Name of Unit	Topic No.	Name of Topic	Number of Lectures
I	Adolescence	1.1	Physical development: maturation, growth, puberty, eating disorders, brain development & thinking, cognitive growth	15
		1.2	Cognitive development: piaget, information processing theory, egocentrism, school performance & threats to adolescents well being	
		1.3	Social & personality development: Self concept, self esteem, identity formation, marica's appraoch, eriksons approach, religion & spirituality, social identity, depression & suicide; Relationship: family ties, relationship with peers, popularity & rejection, conformity, juvenile delinquency	



II	Early adulthood	2.1	Physical development & senses, physical disabilities, stress & coping	15
		2.2	Cognitive development: intellectual growth, postformal thought, perrys approach, schaies stages & intelligence	
		2.3	Relationships: intimacy, liking & loving during early adulthood	
III	Middle adulthood	3.1	Physical transitions, reaction time, Sex in middle adulthood	15
		3.2	Ups & downs in middle adulthood, stress, A's & B's of coronary heart disease	
		3.3	Cognitive development: intelligence, experte vs novice, memory & schemas; personality: eriksons stages, stability versus change; Marriage ups & downs & divorce, work & career, leisure time	
IV	Late adulthood & Death & dying	4.1	Physical & cognitive development in late adulthood: aging, physical transitions, reaction time, senses; cognitive development in late adulthood	15
		4.2	Personality development & aging; relationships in late adulthood	
		4.3	Concept of death, confronting death, Grief & bereavement	
<b>TOTAL LECTURE</b>				<b>60</b>

**Course outcomes:**

1. Gain insight into physical, cognitive, and social development, including puberty and identity formation.
2. Analyze physical, cognitive, and relationship dynamics, including stress management and intimacy in early adulthood
3. Explore cognitive growth theories and stages of intelligence development during early adulthood.
4. Examine physical transitions, cognitive changes, and personality development,

- including the impact of marriage and career on well-being in middle adulthood
5. Understand physical and cognitive changes in late adulthood, and their impact on personality and relationships.
  6. Explore coping mechanisms for confronting death, grief, and bereavement in late adulthood.

**Reference Books:**

1. Feldman, R. S. (2009). Development Across The Lifespan, 8 th edition (2018)
2. Berk, L. E. (2006). Child Development. (7th Ed). New Delhi: Pearson Education Dorling Kindersley (India) pvt ltd.
3. Berk, L. E. (2004). Development through the lifespan. (3rd Ed). New Delhi: Pearson Education Dorling Kindersley (India) pvt ltd.
4. Cook, J. L., & Cook, G. (2009). Child Development: Principles and Perspectives. Boston: Pearson Education
5. Crandell, T. L., Crandell, C. H., & Zanden, J. W. V. (2009). Human Development. (9th Ed). New York: McGraw Hill co. Inc.
6. Dacey, J. S. & Travers, J. F. (2004). Human Development across the lifespan. (5th Ed). McGraw Hill co.
7. Kail, R. V. (2007). Children and their Development. (4th Ed). New Jersey: Pearson Education Inc.
8. McDevitt, T. M., & Omrod, J. E. (2007). Child Development and Education. (3rd Ed). New Jersey: Pearson Education Inc.
9. Papalia, D. E., Olds, S. W., & Feldman, R. (2004). Human Development. (9th Ed). McGraw Hill, international Edition
10. Shaffer, D. R., & Kipp, K. (2007). Developmental Psychology: Childhood and Adolescence. (7th Ed). Thomson Learning, Indian reprint 2007

**Case Study:**

<b>I</b>	Self-injuring youth reported higher levels of anxious attachment, preoccupation with relationships and need for approval in relationships, and difficulties in all domains of emotion regulation. Developmental psychopathology models have proposed processes and mechanisms through which inadequate caregiving environments or childhood maltreatment experiences can lead to engagement in non-suicidal self-injuring behaviors. Individuals who endorsed self-injuring behaviors also reported higher levels of reaching out to others to fulfill their dependency needs and tend to seek others' approval for fear of rejection.
<b>II</b>	Amit, a 40-year-old corporate executive in Mumbai, India, has achieved career success but finds himself questioning the meaning and purpose of

	<p>his work. Despite financial stability, Amit feels unfulfilled and disconnected from his personal life and relationships. Faced with existential angst and burnout, he embarks on a journey of self-discovery, seeking to redefine his priorities and find greater work-life balance. As Amit confronts midlife transitions, he grapples with societal expectations, personal aspirations, and the desire for fulfillment beyond professional achievements. Amit's journey reflects the challenges faced by many middle-aged adults in India's fast-paced urban environments. Struggling to balance career aspirations with personal fulfillment, Amit seeks meaning and purpose in his life beyond corporate success. As he reevaluates his goals and relationships, Amit navigates through existential questions, seeking to cultivate a more holistic and fulfilling lifestyle. Along the way, he discovers the importance of self-reflection, social support, and resilience in navigating midlife transitions and overcoming challenges.</p>
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# Practicals

Course Code	Title	Credits
<p><b>PUSPS205P</b> (PUSPS201+ PUSPS2102) <b>Cognitive Psychology Practicals</b></p>	<ol style="list-style-type: none"> <li>1. Experiment on Inattentive Blindness and analysing the data of the same</li> <li>2. Experiment of Reaction time: Simple stimulus response versus Disjunctive stimulus response</li> <li>3. Experiment on stroop effect. Data gathering &amp; analysis</li> <li>4. Observing the difference in retention by studying rote learning technique versus method of loci</li> <li>5. Movie analysis and report writing. Movie: A beautiful Mind. Analysis prompts can include understanding the symptoms of schizophrenia and assessing the neurological underpinnings of the same. Understanding the psychological &amp; physical side effects of pharmacological treatment on the same.</li> <li>6. To track sleep patterns and dream content over a specified period and analyze their psychological implications.</li> <li>7. Students engage in activities that simulate challenges associated with language disorders, such as reading with scrambled letters or communicating with restricted vocabulary. Reflect on the experience and discuss the impact of language disorders on daily life</li> <li>8. Research on Case studies on Traumatic brain injuries, and a reflection on the behavioral changes associated with the injuries</li> </ol>	<p>2</p>