

KERAL VERMA SUBHARTI COLLEGE OF SCIENCE DEPARTMENT OF CHEMISTRY

VALUE ADDED COURSE AND ITS OBJECTIVES Session 2020-21



Course Name: Advanced
Clinical Biochemistry
Course Code: VAC-C-008
Course Coordinator: Dr. Ankita
Agarwal
Designation: Assistant Professor
Contact no.: -8094129582
Duration: 24/5/2021-12/6/2021



The objective of the program

To teach biochemical process and reactions in the human body and recognize relevance of these process in diagnosis, patient care and treatment. To train the UG and PG in practical skills of biochemical investigations and interpretation of the same in solving Clinical problems.

VALUE ADDED COURSES

Advanced Clinical Biochemistry

VAC-C-008

Objectives : To familiarize the students with the advanced techniques of clinical Biochemistry

Unit I: Aging and Neurological Disorders

Current view and theories of aging, auto immune connection and HLA association, processes of aging and biochemical alteration, DNA damage, protein oxidation and axonal transport in aging, nutritional intervention as anti-aging therapy.

Alzheimer's disease: Causes, symptoms, diagnosis, pathogenesis, genetics, APP, ApoE, PS2, tau protein, risk factors and therapeutic approaches.

Progeria

Parkinson's disease: Causes, symptoms, diagnosis, pathogenesis, genetics and therapeutic approaches

Unit II: Obesity

Theories, lipid metabolism, adipose tissue anomalies

Genetic basis of familial obesity, effects of neuropeptides and leptin in nutrient partitioning. Obesity related derangements in metabolic regulation.

Therapeutic approaches

Unit III: Molecular and Metabolic Diseases

Human gene map, genetic diversity, polymorphism, genetic linkage, chromosomal disorder. Monogenetic Disorders: Autosomal dominant, autosomal recessive, X-linked, Multifactorial disorders, Genetic heterogeneity, Allelic heterogeneity, Pathogenesis of genetic disease, Galactosemia, Hemophilia, Sickle cell anemia, Muscular dystrophy, Hypercholesterolemia, Gout, Turner's syndrome.

Unit IV: Reproductive Biochemistry

Overview of reproductive system and reproduction, biochemistry of reproductive disorders (male & female), Influence of various factors in reproduction with special reference to role of prostaglandins and gonadotrophins. Mechanism and methods of birth control and possible biochemical consequences thereof. Biochemical marker's in



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infertility disorders. Techniques involved in assisted reproductive technology (ART). Culture media and cell culture techniques in ART programme.

Suggested References:

1. Clinical Biochemistry – Metabolic and Clinical aspects By-William J. Marshall & Stephen K. Angert.
2. Harper's Biochemistry - 27th Ed.
3. Text book of Medical Physiology - By Guyton.
4. Text book of Physiology -By Burn & levy.
5. Biochemistry –By L .Stryer (Freeman & Co.NY.)
6. Biochemistry with clinical correlation- By Thomas Devli.
7. The Metabolic Basis of Inherited Disease 5th Ed.-By John Stanbury.
8. Teitz Fundamentals of Clinical Chemistry –By C.A.Burtis & Ashwood .
9. Biochemistry - By Lehninger.
10. Lehninger's Biochemistry –By Nelson & Cox.
11. Biochemistry –By Stanford.
12. Basic Medical Biochemistry: A Clinical approach- By Smith.
13. Principles of Internal Medicines- By Harrison.T. R.
14. Practical Biochemistry Principles & Techniques- By Wilson & Walker.
15. Practical Biochemistry –By David Plummer.

Shyaji

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Department of Chemistry
Keral Verma Subharti College of Science
SWAMI VIVEKANAND SUBHARTI UNIVERSITY

(Established under U.P. Govt. Act no. 29 of 2008 and approved under section 2(B) of UGC Act. 1956)
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Ref. No. KVSCOS/CHY/2021/

Date: 14-06-2021

Report on Value Added Course

A value added course on "Advanced Clinical Biochemistry" was conducted in Chemistry department for all students, one hour per day for 16 days. The course starts on 24-05-2021 and completed on 10/06/2021. The session was handled by Dr. Ankita Agarwal, Chemistry on the need for "Advanced Clinical Biochemistry". On that session students learnt about the basic concepts of biochemistry. Students felt that this value added session on Advanced Clinical biochemistry was very much useful for them and they got the basic idea for developing their knowledge about clinical field. To teach biochemical process and reactions in the human body and recognize relevance of these process in diagnosis, patient care and treatment. To train the UG and PG in practical skills of biochemical investigations and interpretation of the same in solving Clinical Problems. It is planned to extend this value added training in the next semester with having more refined and advanced tool for their development.


Dr. Suchitra Tyagi,

HOD, Chemistry,

KVSCOS, SVSU, Meerut


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Dr. Ankita Agarwal taking VAC lecture on Advanced Clinical Biochemistry

Student List of Value added Course 2020-2021

Even Semester

No of Student: 41

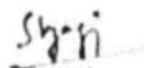
Course Name: **Advanced Clinical Biochemistry**

Course Code: **VAC-C-008**

S.No.	Course Programme	Name	Student enrollment number
1	BSC H CHEMISTRY	Chesta Jain	190600002242
2	BSC H CHEMISTRY	Simran Mehdi	190600001375
3	BSC H CHEMISTRY	Tanisha Khatri	190600001373
4	BSC H CHEMISTRY	Shivani	190600001372
5	BSC H CHEMISTRY	Mansi Tyagi	190600001371
6	BSC H CHEMISTRY	AbhayGangwar	190600002257
7	BSC H CHEMISTRY	MehvishArif	190600001721
8	BSC H CHEMISTRY	Akansha Rana	190600001376
9	BSC H CHEMISTRY	Kartik Saini	190600001374
10	BSC PCM	Nikhil Tomar	190600001358
11	BSC PCM	Banti	190600001359
12	BSC PCM	Vinay Kumar Rana	190600001360
13	BSC PCM	AayushDeshwal	190600001361
14	BSC PCM	Udit Chauhan	190600001363
15	BSC PCM	Akshay Kumar	190600001364
16	BSC PCM	Sahil Hasan	190600001366
17	BSC PCM	Akash	190600001367
18	BSC PCM	Km Himanshi	190600001368
19	BSC PCM	Shivam	190600001370
20	BSC PCM	HarshitChoudhary	190600002364
21	BSC PCM	Harshit Chauhan	190600002376

22	BSC PCM	ShivamGoswami	1906000002591
23	BSC CBZ	Geetanjali Singh	1906000001336
24	BSC CBZ	Priyanshu Chauhan	1906000001339
25	BSC CBZ	Shivangi	1906000001341
26	BSC CBZ	Rashi	1906000001342
27	BSC CBZ	Arushi Mishra	1906000001343
28	BSC CBZ	Swatantrakumar	1906000001346
29	BSC H CHEMISTRY	KanishkaGoel	2006000033786
30	BSC H CHEMISTRY	Swati Kumari	2006000050278
31	BSC H CHEMISTRY	Abhishek Barthwal	2006000050295
32	BSC H CHEMISTRY	Abhishek Yadav	2006000050296
33	BSC H CHEMISTRY	Akshita Saini	2006000050297
34	BSC H CHEMISTRY	Bhujveer	2006000050298
35	BSC H CHEMISTRY	Divyanshu Dhiman	2006000050299
36	BSC H CHEMISTRY	Farukh Ali	2006000050300
37	BSC H CHEMISTRY	Gaurav Kaushik	2006000050301
38	BSC H CHEMISTRY	Sanskar Sharma	2006000050302
39	BSC H CHEMISTRY	Shreya Sharma	2006000050303
40	BSC H CHEMISTRY	Vidhi Chauhan	2006000050305
41	BSC H CHEMISTRY	Vivek Sharma	2006000050306


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