



Value Added Course

On

DIABETES: NOVEL APPROACHES AND CHALLENGES (PHV-E8)

15 March 2025 - 26 April 2025

About the Course

Diabetes is a chronic metabolic disorder characterized by high blood sugar levels (hyperglycemia) resulting from either inadequate production of insulin or the body's ineffective use of insulin. Insulin, produced by the pancreas, plays a crucial role in regulating blood sugar levels. There are three main types of diabetes: type-1 diabetes, type-2 diabetes, and gestational diabetes. The complications of diabetes can be severe and affect various organ systems, including the heart, blood vessels, kidneys, eyes, and nerves. Long-term complications may include cardiovascular disease, stroke, kidney disease, diabetic retinopathy, neuropathy, and foot ulcers. About 422 million people worldwide have diabetes, the majority living in low-and middle-income countries, and 1.5 million deaths are directly attributed to diabetes each year. Both the number of cases and the prevalence of diabetes have been steadily increasing over the past few decades. An estimated 700 million adults worldwide will have diabetes by 2045. Addressing the complexities of diabetes requires ongoing research, innovation, and collaboration among healthcare professionals, researchers, policymakers, and individuals living with the condition.

Throughout the value added course, participants will gain a deep understanding of the intricacies of diabetes, including its underlying causes, risk factors, and the various types. Students will learn about the diagnostic tools and techniques used to identify diabetes, as well as the importance of early detection. Moreover, the course will explore the existing treatment modalities for diabetes, including medication, lifestyle modifications, and insulin therapy, while also highlighting the limitations of these approaches. Additionally, the course will shed light on the challenges faced by individuals with diabetes, healthcare professionals, and policymakers, including the rising prevalence of the disease, access to care, and the economic burden. Participants will be encouraged to explore potential opportunities to address these challenges and improve diabetes outcomes on individual, community, and global levels. **By the end of this course, learners will be equipped with valuable knowledge and insights into**

diabetes and its management, empowering them to contribute to the development of novel approaches and solutions for this complex condition.

This is an online course divided into five modules. Lectures will be conducted through Integral Learning Initiative - Learning Management System (ILI-LMS) / Google meet. *Upon successful completion of the course, each candidate shall receive a certificate.*



Key USPs

- Gain a holistic understanding of diabetes through comprehensive coverage of its introduction, diagnosis, treatment options, and novel approaches.
- Stay updated with the rapidly evolving field of diabetes management, exploring innovative therapies, and emerging technologies.
- Identify challenges and opportunities for improvement in diabetes care, encouraging critical thinking and solution development.
- Acquire practical insights, skills, and strategies to enhance diabetes management and improve patient outcomes in real-world scenarios.

Course Objective

This course aims to provide a comprehensive understanding of diabetes mellitus, including its pathophysiology, complications, and current treatment strategies. It will explore novel therapeutic approaches, emerging drug delivery systems, and advancements in personalized medicine for diabetes management. The course will also address challenges in diabetes care, such as patient adherence, socioeconomic factors, and the role of technology in monitoring and treatment.

Learning Outcomes (PO-1, PO-2, PO-3, PO-4, PO-5, PO-10, PO-11)

After the successful course completion, participants will attain:

- Comprehensive understanding of diabetes.
- Knowledge of emerging trends in diabetes management.
- Development of critical thinking and problem-solving skills.
- Practical application of knowledge and skills in diabetes management.

Course Coordinator

Prof. (Dr.) Badruddeen, Faculty of Pharmacy, Integral University, Lucknow. Dr. Gazala Noor, Lecturer, Faculty of Pharmacy, Integral University, Lucknow. Kindly contact for queries: Email: badar@iul.ac.in Mobile: +91-9918196188, +91-8840925714



Name of Instructors

1. **Dr. Badruddeen**, Professor , Faculty of Pharmacy, Integral University, Lucknow
2. **Dr. Mohammad Ahmad**, Associate Professor, Faculty of Pharmacy, Integral University, Lucknow
3. **Dr. Mohd. Muazzam Khan**, Associate Professor, Faculty of Pharmacy, Integral University, Lucknow
4. **Dr. Asad Ahmad**, Assistant Professor, Faculty of Pharmacy, Integral University, Lucknow
5. **Ms. Aimen Salman**, Lecturer, Faculty of Pharmacy, Integral University, Lucknow
6. **Dr. Rufaida Wasim**, Lecturer, Faculty of Pharmacy, Integral University, Lucknow

Eligible candidates

- Faculty Members
- Technical Persons involved In Pharmaceutical Analysis and Pharmaceutical Research
- Research Scholars
- Students

Eligible Departments

- ✓ Pharmacy
- ✓ IIMSR
- ✓ Bioscience
- ✓ Bioengineering
- ✓ Physiotherapy
- ✓ Nursing

How to Apply

Registration Link: <https://forms.gle/UWJ4SZyPXV2wxhEaA>

Last Date of Registration: **March 12, 2025**

Course Fee: Nil

Maximum number of Participants: 90



Course Details

Course Platform:

Online: Integral Learning Initiative - Learning Management System (ILI-LMS) and Google meet.

Course duration: 30 Hours

Course commencement: 15 March, 2025

End of course: April 26, 2025

Note: The timings of the lectures may be altered by the course coordinator as per requirement. The rescheduled timing will be informed well in advance to all the participants.

Course Description

CONTACT HOUR**CONTENTS****MODULE: 1. INTRODUCTION OF DIABETES**

15/03/2025
2:00 PM – 3:00 PM

Introduction about course

16/03/2025
3:00 PM – 5:00 PM

Diabetes: Introduction and different types
Pathogenesis and Pathways

22/03/2025
2:00 PM – 4:00 PM

Causes and risk factor

22/03/2025
5:00 PM – 6:00 PM

Module Assessment Quiz 1



MODULE: 2. DIAGNOSIS OF DIABETES

23/03/2025
2:00 PM – 4:00 PM

Clinical symptoms and complications

29/03/2025
2:00 PM – 4:00 PM

Diagnostic tests and tools

29/03/2025
5:00 PM – 6:00 PM

Module Assessment Quiz 2

MODULE: 3. CURRENT TREATMENT FOR DIABETES

30/03/2025
2:00 PM – 4:00 PM

Pharmacological management
Insulin: types

05/04/2025
2:00 PM – 4:00 PM

Pharmacological management
Oral hypoglycemic drug classification Part (a)

06/04/2025
2:00 PM – 4:00 PM

Pharmacological management
Oral hypoglycemic drug classification Part (b)

12/04/2025
2:00 PM – 4:00 PM

Non-Pharmacological management

12/04/2025
5:00 PM – 6:00 PM

Module Assessment Quiz 3



MODULE: 4. NOVEL APPROACHES FOR DIABETES

13/04/2025
2:00 PM – 4:00 PM

Recent advances in diabetes treatment

19/04/2025
2:00 PM – 4:00 PM

Stem cell therapy
Immunotherapy

19/04/2025
5:00 PM – 6:00 PM

Module Assessment Quiz 4

MODULE: 5. CHALLENGES AND OPPORTUNITIES

20/04/2025
2:00 PM – 4:00 PM

Challenges in management of diabetes

26/04/2025
2:00 PM – 4:00 PM

Opportunities for improving diabetes care.

26/04/2025
5:00 PM – 6:00 PM

Group discussion
Module Assessment Quiz 5

The course includes a total of 5 quizzes (comprising MCQs; One quiz after completion of each module) mandatory for all enrolled candidates. Each quiz shall be of 20 grades and a minimum of 50% shall be required as eligibility criteria for successfully completing the course and receiving the certificate.