**Date: 22<sup>nd</sup> September 2022.**

## Subject: Value Added Trainings School of Pharmaceutical and Population Health Informatics

### Attention: B.Pharm- VIIth Semester (Session-ODD-2022-23)

Above mentioned students are hereby informed that as per the approved value added trainings for the academic year 2022-23, Career Development Centre offers the below mentioned technical training in the odd semester (2022-23). Details as follows:

| Training | Semester | Program | Date of Commencing |
|---|---|---|---|
| Clinical Pharmaco Informatics (VAT-71) | VIIth | B.Pharm | 3<sup>rd</sup> October 2022 |

**NOTE:**

1. It is mandatory for all the concerned students to enroll for at least two value added training in the current semester. In case of any query please contact the Career Development Centre, DIT University.

2. The Department concerned shall notify the details about timings and venue of the training sessions keeping Career Development center in loop.

Mr. Saurav Badoni
Career Services Cell
DIT University, Dehradun
**In charge- CDC**

**To:**
- All Deans / Directors
- HoDs
- Head CDC

With the request to bring the above to the notice of the students

**Copy to:**
- Chairman
- Chancellor
- Vice Chancellor
- Pro Vice Chancellor

For information please

# <u>VAT 71- Clinical Pharmaco-informatics</u>

**Venue:** Vishveshwarya 506 | **Duration:** 36 Hrs ($3^{rd}$ October 2022 to $5^{th}$ November 2022)

The Clinical Pharmacognosy training was conducted for students of Bachelor of Pharmacy program ($7^{th}$ Semester), the targeted students for the training were those who had to be skilled for areas like pharma industries, vaccine development, clinical research projects, academic research. It was conducted by the **School of Pharmaceutical and Population Health Informatics**, the coordinator for the training was **Dr. Dhirodatta Senapati.**

## OBJECTIVE:

The training aims to give an added value to the students of Bachelor of Pharmacy both at academic level and industry level in the areas like pharma industries, vaccine development, clinical research projects, academic research, etc. Main objectives:

1. To learn the world of Bioinformatics and its evolution.

2. Assess the, different types of biological data and bioinformatics resources.

3. Assess and explain the tools and techniques of analysing DNA and protein sequences.

4. Discuss the basic principles and applications of pharmacogenomics.

5. Utilize the different analysis packages available for different computational jobs.

## TRAINING OUTLINE:

1. Introduction to bioinformatics
2. Chemo-informatics & Drug Design
3. Predictive Pharmacology
4. Project Work

Divided into 5 Units:

UNIT I: Overview of Bioinformatics and Information Technology History, Scope and application, Internet and World Wide Web; Generation of computers; Concept of Networking; Introduction to Data Mining; Application of data mining in Bioinformatics.

UNIT II: Bioinformatics Resources Biological databases, Basic classification – Sequence & Structure; Generalized & Specialized.

UNIT III Bioinformatics techniques Sequence comparison and alignment; Local and Global Alignment , Concept of Gap, Gap Penalty & Scoring Matrices , Dot Plot Analysis.

UNIT IV: Bioinformatics tools Information retrieval system (Entrez, SRS); Sequence alignment tools (BLAST, FASTA, CLUSTAL-W/X, MUSCLE, TCOFFEE), Variants of BLAST.

Training also involved the concepts of Information and Knowledge Delivery. The next core competency needed, information and knowledge delivery which involves how the databases are utilized. Pharmacy informaticists ensure that there is interoperability between the pharmacy information system and all other medication-related systems. With constant changes to clinical practice and complexities within health care, integrated systems are needed to support the delivery of accurate medication-related information to the end-user at the point of clinical decision-making. Pharmacy informaticists support best practices and apply knowledge of informatics principles, human factors, and systems design to the user interface, to ensure that there is no confusion or incorrect information at the point of care. This information delivery can be provided before decisions are made or passively as reference information. Pharmacy informaticists not only support and oversee the creation, application, delivery, and management of clinical information and knowledge, but they also inform how systems should be developed and why interoperability is essential to safe medication management.

**FUTURE DIRECTIONS**

There are many more interesting areas within health and pharmacy informatics to learn about and further develop. We have described only some examples of a pharmacy informaticist's operational responsibilities and current initiatives, but we foresee that the future holds many exciting changes. The health informatics curriculum is well established in medical and nursing training; however, in pharmacy, it has been slower to evolve. Although it is not new, the practice of pharmacy informatics is in a state of rapid growth. This diverse and evolving field leads the use of technology at multiple levels of pharmacy practice, from departmental projects to national collaborative. Equipped with a strong understanding of medication management workflows and knowledge of clinical system functionalities, pharmacy informaticists are in a great position to collaborate with other health care providers to optimize information management, improve workflow, and reduce medication errors. By supporting and developing the pharmacy informatics role, the profession of hospital pharmacy can optimize innovations to medication-related processes so that pharmacists can continue to improve patient care and outcomes.

**Training Outcomes:**

1. Knowledge of bioinformatics tools application in drug discovery and development process.
2. Scientific professionals with added values of pharmcoinformatics in biological /pharmaceutical sciences research, at both academic level and industry level.
3. Acquisition of additional skills in Pharmaco-informatics for manpower required in pharma industries, vaccine development, clinical research projects, research, etc.
4. Added skills to students pursuing post-graduate studies in life sciences/pharmaceutical sciences/clinical sciences, etc.

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# Value added course Details (Academic Year: 2022-23)

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|---|---|---|---|
| VAT Course Name: Clinical Pharmaco-informatics | | | |
| VAT Code: VAT 71 | | | |
| Duration in Hours: 36 | | | |
| Number of Students Enrolled: 94 | | | |
| Number of Students Completed: 90 | | | |

| Grades: | G= GOOD ; S = Satifactory ;  P = Poor ; W = Withdraw | | |
|---|---|---|---|
| Student ID | Student Name | Program/Course | Passing Grade |
| 190921008 | SAVITA ARYA | Bachelor of Pharmacy | S |
| 190921021 | RITIKA SHARMA | Bachelor of Pharmacy | S |
| 190921045 | VIKRANT SIROHI | Bachelor of Pharmacy | G |
| 190921061 | VISHAL PANDEY | Bachelor of Pharmacy | G |
| 190921007 | HITESH SINGH | Bachelor of Pharmacy | S |
| 190921022 | PRIYANKA SHARMA | Bachelor of Pharmacy | P |
| 190921002 | SHUBHAM GAUTAM | Bachelor of Pharmacy | S |
| 190921031 | MANAV CHHABRA | Bachelor of Pharmacy | G |
| 190921058 | PALAK BHATNAGAR | Bachelor of Pharmacy | G |
| 190921023 | SWATI JAISWAL | Bachelor of Pharmacy | S |
| 190921064 | MOHD SAQUIB KHAN | Bachelor of Pharmacy | S |
| 190921048 | ABHISHEK KUMAR | Bachelor of Pharmacy | S |
| 190921004 | ABHISHEK RAHI | Bachelor of Pharmacy | G |
| 190921065 | ANIKET GARG | Bachelor of Pharmacy | G |
| 190921025 | RUCHI BHARDWAJ | Bachelor of Pharmacy | S |
| 190921056 | ABHISHEK KUMAR | Bachelor of Pharmacy | S |
| 190921028 | SAANIDHYA BAREJA | Bachelor of Pharmacy | S |
| 190921060 | ARIHANT PRATAP SINGH | Bachelor of Pharmacy | G |
| 190921019 | VANSHIT SINGH | Bachelor of Pharmacy | G |
| 190921032 | MANISH RANA | Bachelor of Pharmacy | S |
| 19P277006 | RAHUL KUMAR | Bachelor of Pharmacy | S |
| 190921057 | DIKSHITA SAINI | Bachelor of Pharmacy | S |
| 190921026 | RAHUL KASHYAP | Bachelor of Pharmacy | G |
| 190921013 | KUMAR BHASKAR | Bachelor of Pharmacy | G |
| 190921033 | ABHISHEK KUMAR | Bachelor of Pharmacy | S |
| 190921084 | ABHISHEK RAWAT | Bachelor of Pharmacy | S |
| 190921015 | KRISHNA PATEL | Bachelor of Pharmacy | S |
| 190921010 | VASU DEV CHAUHAN | Bachelor of Pharmacy | G |
| 190921043 | ASIF CHAUDHARY | Bachelor of Pharmacy | G |
| 190921059 | RAMANKANT SINGH | Bachelor of Pharmacy | S |
| 190921003 | RAVI SINGH | Bachelor of Pharmacy | S |
| 190921024 | ANMOL MAMGAIN | Bachelor of Pharmacy | S |
| 190921041 | AKSHAY KAMBOJ | Bachelor of Pharmacy | G |
| 190921017 | ABHINOVE BHAROTIYAL | Bachelor of Pharmacy | G |
| 190921020 | MD SALMAN | Bachelor of Pharmacy | S |
| 190921030 | LAXITA CHAUHAN | Bachelor of Pharmacy | S |
| 190921018 | ANAMIKA | Bachelor of Pharmacy | S |
| 190921014 | SHAKIB ALI | Bachelor of Pharmacy | G |
| 190921053 | AAKASH RANJAN | Bachelor of Pharmacy | G |
| 190921009 | VIPUL VISHNU SAWASHA | Bachelor of Pharmacy | S |
| 190921027 | RITUL SHARMA | Bachelor of Pharmacy | S |
| 190921050 | MEGHA KUMARI | Bachelor of Pharmacy | S |

Career Services Cell
DIT University Dehradun

| 190921075 | PRINCE KUMAR | Bachelor of Pharmacy | G |
|---|---|---|---|
| 190921034 | MOHD. ARMAN | Bachelor of Pharmacy | G |
| 190921011 | ANIVESH GANDOTRA | Bachelor of Pharmacy | S |
| 190921012 | ROHIT KUMAR TOMAR | Bachelor of Pharmacy | P |
| 190921038 | RONIT MALIK | Bachelor of Pharmacy | S |
| 190921036 | MOHD FARHAN | Bachelor of Pharmacy | G |
| 190921046 | GARV AGGARWAL | Bachelor of Pharmacy | G |
| 190921005 | FOZIA KHANUM | Bachelor of Pharmacy | S |
| 190921062 | GUNJA KUMARI | Bachelor of Pharmacy | S |
| 190921042 | MOHD HARIS KHAN | Bachelor of Pharmacy | S |
| 190921035 | ANSHIKA TOMAR | Bachelor of Pharmacy | G |
| 190921047 | SHIVANGI SHARMA | Bachelor of Pharmacy | G |
| 190921051 | ALFISHA | Bachelor of Pharmacy | S |
| 190921054 | RADHA YADAV | Bachelor of Pharmacy | S |
| 190921066 | BITTU KUMAR | Bachelor of Pharmacy | S |
| 190921082 | AYUSH CHAUHAN | Bachelor of Pharmacy | G |
| 190921085 | ARUMOY BRAHMA | Bachelor of Pharmacy | G |
| 190921067 | MOHIT SHARMA | Bachelor of Pharmacy | S |
| 190921078 | NEERAJ SHUKLA | Bachelor of Pharmacy | S |
| 190921087 | RAJAN KUMAR | Bachelor of Pharmacy | S |
| 190921069 | VASU BATRA | Bachelor of Pharmacy | G |
| 190921063 | TANZILA ASLAM SIDDIQUI | Bachelor of Pharmacy | G |
| 190921076 | GYANENDRA JOSHI | Bachelor of Pharmacy | S |
| 190921074 | RIMSHA ASHFAQ | Bachelor of Pharmacy | S |
| 190921089 | TANIA | Bachelor of Pharmacy | S |
| 190921077 | DISHA VERMA | Bachelor of Pharmacy | G |
| 190921083 | WARISH ANSARI | Bachelor of Pharmacy | G |
| 190921079 | RIYA SINHA | Bachelor of Pharmacy | S |
| 190921101 | SUSHIL YADAV | Bachelor of Pharmacy | S |
| 190921081 | PRIYANSHI PUSHKAR | Bachelor of Pharmacy | S |
| 190921086 | SATYAM SHARMA | Bachelor of Pharmacy | P |
| 190921094 | KABIN SHRESTHA | Bachelor of Pharmacy | G |
| 190921095 | SASMIT THARU | Bachelor of Pharmacy | S |
| 190921090 | JYOTI TIWARI | Bachelor of Pharmacy | S |
| 190921098 | ANKIT ANAND | Bachelor of Pharmacy | S |
| 190921092 | MOHD HAROON | Bachelor of Pharmacy | G |
| 190921096 | AVNI SINGH | Bachelor of Pharmacy | G |
| 190921088 | ANUSHTHI JAIN | Bachelor of Pharmacy | S |
| 190921091 | VISHAL BHANDARI | Bachelor of Pharmacy | S |
| 190921093 | ABHISHEK SINGH | Bachelor of Pharmacy | S |
| 190921100 | VIKAS KUMAR YADAV | Bachelor of Pharmacy | G |
| 190921097 | MANIK KHURANA | Bachelor of Pharmacy | G |
| 190921099 | TARUN SHARMA | Bachelor of Pharmacy | S |
| 190921102 | MOHAMMAD SHAHEED ANSARI | Bachelor of Pharmacy | S |
| 200921900 | ABHINAV KUMAR SINGH | Bachelor of Pharmacy | S |
| 200921905 | NIDHI DWIVEDI | Bachelor of Pharmacy | G |
| 200921901 | SAVLEEN SETHI | Bachelor of Pharmacy | G |
| 200921903 | SHRADDHA TRIPATHI | Bachelor of Pharmacy | S |
| 200921904 | DIKSHA NEGI | Bachelor of Pharmacy | S |
| 200921906 | DEEPAK KUMAR | Bachelor of Pharmacy | P |
| 200921908 | DEWANSHI TRIPATHI | Bachelor of Pharmacy | G |
| 200921907 | SHIVI KASHYAP | Bachelor of Pharmacy | G |