

Course Title: **Astrochemistry- Evolution from Stardust to Biomolecules**

Duration: 15 hours

Language of instruction: English

Date of first lecture: 03.11.2023

Instructor Name: Dr. Arunlibertsen Lawzer and Dr. Thomas Custer

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Registration deadline: 01.11.2023

## **Syllabus**

### **Section I (4 hours)**

Introduction to interstellar molecular clouds and planetary ices

H, C, O atoms to Hydrocarbons and oxygen containing molecules

### **Section 2 (4 hours)**

Nitrogen containing hydrocarbon in interstellar medium

Origin of amino acids, polypeptides, and nitrogenous bases

Phosphorus and sulphur chemistry

### **Section 3 (4 hours)**

Origin of carbohydrates

Formation of Nucleic acid (DNA and RNA)

### **Section 4 (3 hours)**

Techniques involved in detection and laboratory investigation of space chemistry