

# International Summer School Manipal University Jaipur [ISSMUJ]-2022

[Hybrid Mode]

## Course Overview

### Name of Course: Gemology

Name of instructor: Ms Sonali Sharma

Session: June-July 2022

Language of instruction: English

Number of contact hours: 36

Credit awarded: 03

### Objective of Course

To introduce the students to the world of gemstones, their properties, and their sources. Students will be able to identify and differentiate between the various categories of gemstones. To acquire broad understanding of Precious and Semi-Precious stones and their properties. To impart knowledge of sourcing hubs of Gemstones and their processes of cutting, polishing and finishes.

### Syllabus

Unit-I Introduction to Gemstone: Overview of gemstones, Nomenclature of Gemstones, Composition and Classification, Crystal System, Mining: Different mining operations of gemstones: open pit mining, alluvial mining, underground mining, Process from mining to finish gemstones

Unit-II Properties of Gemstone: Physical Properties: Hardness, Toughness, Cleavage, Fracture, Specific Gravity etc.; Optical Properties – Color, Refraction, Transparency, Lustre etc.

Unit-III Various type of cuts and their terminology

Unit-IV Settings in Gemstones

Unit-V Instruments used in Gemology: Loupe and Refractometer, Polariscope and Dichroscope, Microscope and Spectroscope, Chelsea Filter, Calliper & Leveridge Gauge

### Organization of course

Total contact hrs 36		
1st week:	10 hrs (classes)	2 hrs (self-study/assignment)

2nd week:	10 hrs (classes)	2 hrs (Mid term exam/assessment/discussion)
3rd week:	10 hrs (classes)	2 hrs (End term exam)

**Mode of lectures:** online lecture/online videos/discussion

### Course Plan

Lecture no.	Topic	Lecture mode	Instructor
L: 1-6	Introduction to Gemstone: Overview of gemstones, Nomenclature of Gemstones, Composition and Classification, Crystal System	Lecture plus Discussion	Sonali Sharma
L: 7-12	Mining: Different mining operations of gemstones: open pit mining, alluvial mining, underground mining, Process from mining to finish gemstones	Lecture plus Discussion	Sonali Sharma
L: 13-18	Properties of Gemstone: Physical Properties - Hardness, Toughness, Cleavage, Fracture, Specific Gravity etc.; Optical Properties – Color, Refraction, Transparency, Lustre etc.	Lecture plus Discussion	Sonali Sharma
L: 19-24	Various type of cuts and their terminology	Lecture plus Discussion	Sonali Sharma
L: 25-30	Settings in Gemstones	Lecture plus Discussion	Sonali Sharma
L: 31-36	Instruments used in Gemology: Loupe and Refractometer, Polariscope and Dichroscope, Microscope and Spectroscope, Chelsea Filter, Calliper & Leveridge Gauge	Lecture plus Discussion	Sonali Sharma

### Brief profile of the instructor



**Sonali Sharma** is currently working as Assistant Professor (Senior Scale) in the Department of Business Administration, Manipal University Jaipur, India. She has expertise in the areas of marketing, design management, gemology, jewellery design and manufacturing. Her areas of research are consumer behaviour, visual merchandising, design management etc. She is involved in writing books, conduction of conferences, workshops, and seminars. She has more than 8 years of academic, industry and research experience. She has edited three books, published five book chapters. Her academic interests in teaching are marketing management, customer relations management, principles of business management, organizational performance management, entrepreneurship and courses related to human values.