

Online Course Specifications



Contents

	Page
Introduction	2
Assessment objectives	2
Scheme of assessment	2
Course Structure and Outcomes	3
Results and grades	8
Further information	8

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Introduction

This course is designed to create and sustain interest in, and enjoyment of, gemmology among consumers and those considering a career, or already working in gems and jewellery.

This short, online, entry-level course will introduce students to the fascinating world of gemmology and the enormous variety of beautiful gems available. Students can discover the basics of gemmology at their own pace, perfect for anyone with an interest in gems and suitable for those completely new to gemmology.

Students require no prior knowledge of gemmology to study this course.

Course aims

The aims of this course are to encourage and enable students to:

- develop an interest in and awareness of a selection of gemstones, their properties and uses
- develop knowledge and understanding of the different aspects and basic principles of gemmology
- gain an appreciation for the characteristic and identifying features of the gemstones most commonly offered on the market
- work with or buy gems with increased confidence
- take the final GemIntro Assessment

Certification title

This course leads to Gem-A's Level 2 Award in GemIntro

Assessment objectives

Students should be able to demonstrate that they can:

- recognise, recall and show understanding of basic gemmology from mining and the route to market.
- understand the properties of a selection of the most common gem materials
- have a basic understanding of common gem treatments, imitations and synthetics.

Scheme of assessment

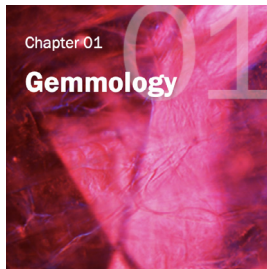
Assessment of students is via an online assessment at the end of the course.

The course is broken into eleven chapters, plus additional reading on selected gem materials. Each chapter is assessed by a computer marked multiple choice quiz to aid learning.

The final, longer, computer marked assessment also comprises multiple choice questions.



Course Structure and Outcomes

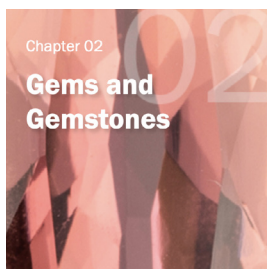


Chapter 01 **Gemmology**

- 1.0 Welcome
- 1.1 How gems became precious
- 1.2 A brief history of gemmology
- 1.3 What is gemmology?
- 1.4 Modern gemmology
- 1.5 Gemmological laboratories

At the end of chapter 1 students should:

- Demonstrate an understanding of what a gem material is
- Understand the purpose of gemmology and gem testing
- Understand the role of gemmological laboratories



Chapter 02 **Gems and Gemstones**

- 2.0 Gems, gemstones and gem materials
- 2.1 Gem quality: beauty, rarity and durability
- 2.2 Value factors

At the end of chapter 2 students should:

- Have a basic understanding of the main factors that define a material as being of gem quality
- Have a basic understanding of what contributes to the value of a gem material

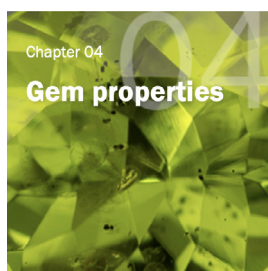
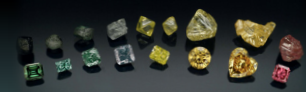


Chapter 03 **Gem materials**

- 3.0 Natural substances
- 3.1 Artificial products
 - 3.1.1 Synthetic stones
 - 3.1.2 Composite stones
 - 3.1.3 Other artificial products

At the end of chapter 3 students should:

- Demonstrate a basic understanding of the definitions of different types of gem materials.

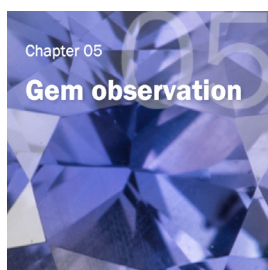


Chapter 04 Gem properties

- 4.0 Gem properties
- 4.1 Hardness and toughness
- 4.2 Fracture and cleavage
- 4.3 Dimensions and weight

At the end of chapter 4 students should:

- understand the basic concept of what a crystal is
- understand the difference between hardness and toughness, and the two types of breakages (fracture and cleavage)

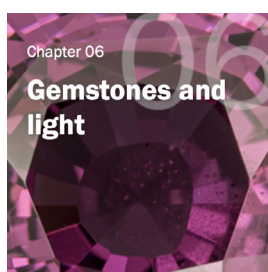


Chapter 05 Gem observation

- 5.0 Gem observation
- 5.1 Handling and cleaning gem materials
- 5.2 Under the naked eye
 - 5.2.1 What can you see?
 - 5.2.2 Tweezers
- 5.3 Using light
- 5.4 The microscope

At the end of chapter 5 students should:

- understand how to handle and care for gems and gem-set jewellery, and some of the cleaning techniques that may be used
- understand the significance of observation by eye and the use of a loupe.
- understand the different ways of using light when observing a gem with the loupe or under the microscope



Chapter 06 Gemstones and light

- 6.0 Gemstones and light
- 6.1 Light-related properties
 - 6.1.1 Lustre
 - 6.1.2 Diamonds and colourless gems
 - 6.1.3 Optical effects
 - 6.1.4 Opaque gems
- 6.2 More on colour
 - 6.2.1 Seeing more than one colour
- 6.3 Colour change
- 6.4 Salesroom



At the end of chapter 6 students should:

- demonstrate a basic understanding of what light is and how it behaves in relation to gems
- demonstrate a basic understanding of transparency, and lustre in gems
- have a basic understanding of gems showing optical effects
- understand pleochroism and the purpose of the dichroscope

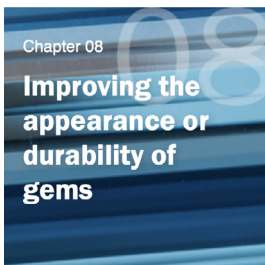


Chapter 07 More on magnification

- 7.0 More on magnification
- 7.1 The internal world of gems – inclusions
 - 7.1.1 Detecting synthetic gems
 - 7.1.2 Origin determination

At the end of chapter 7 students should:

- understand how magnification can be used to view surface and internal characteristics of a gem material
- have a basic understanding of how inclusions can help to determine the nature of a gem
- start developing a visual vocabulary of some important inclusions

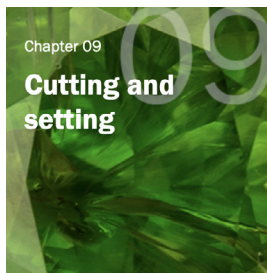


Chapter 08 Improving the appearance or durability of gems

- 8.0 Improving the appearance or durability of gems
- 8.1 Heat or irradiation
- 8.2 Oil, resin and other fillings
- 8.3 Coating
- 8.4 An old practice

At the end of chapter 8 students should:

- understand the basic ways in which treatments can be used to enhance gems
- understand the importance of disclosure in the gem trade



Chapter 09 Cutting and setting

- 9.0 Cutting and setting
- 9.1 Gem cutting
- 9.2 Faceting
 - 9.2.1 Cutting factors
- 9.3 Other forms of cutting
- 9.4 New styles and techniques
- 9.5 Setting

At the end of chapter 9 students should:

- have a basic understanding of gem cutting and the factors cutters might need to consider
- have a basic understanding of faceted and non-faceted cutting styles

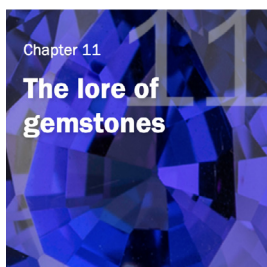


Chapter 10 From mine to market

- 10.0 From mine to market
- 10.1 The geology of gems
- 10.2 Mining effects
- 10.3 Mining processes
- 10.4 The value of gems
- 10.5 Traceability

At the end of chapter 10 students should:

- have a basic understanding of the geology of gem formation
- have an understanding of the mining process and the gemstone pipeline
- understand some of the factors that can influence the value of a gem

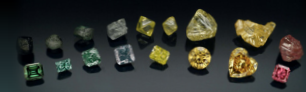


Chapter 11 The lore of gemstones

- 11.0 The lore of gemstones
- 11.1 Birthstones
- 11.2 Gems as medicine

At the end of chapter 11 students should:

- have an understanding of some traditional properties attributed to gemstones, including birthstones



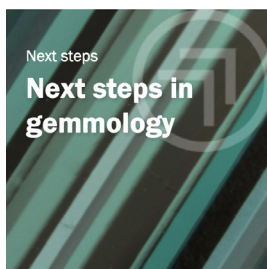
The gemstones

Further reading on 32 gem materials

(Agate, Alexandrite, Amber and Copal, Amethyst, Aquamarine, Beryl group, Biogenic gems, Carnelian, Citrine, Coral, Corundum, Cubic Zirconia, Diamond, Emerald, Garnet, Glass, Iolite, Jade, Lapis Lazuli, Opal, Pearls, Peridot, Quartz, Rock crystal, Ruby, Sapphire, Spinel, Tanzanite, Topaz, Tourmaline, Turquoise, Zircon)

At the end of The Gemstones students should:

- have a basic understanding of some common gem materials found on the market, including natural, artificial and synthetic materials.
- learn some interesting gemstone facts pertaining to their history, lore, use in jewellery and care.
- develop a basic understanding of distinctive characteristics for some common gem materials.

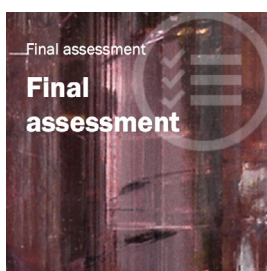


Next steps in Gemmology

- 12.0** Next steps in gemmology
- 12.1** Further study
- 12.2** Learn more about equipment
- 12.3** The gemmologist

At the end of Next steps in gemmology students should:

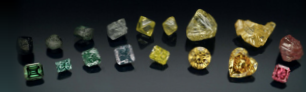
- understand the distinction between gemmology and advanced gemmology
- have a basic understanding of the testing equipment used by gemmologists and in gemmological labs
- understand how to become a qualified gemmologist with Gem-A and the main careers open to gemmologists



End-of-course final assessment

At the end of the course, students should be able to:

- Demonstrate a basic understanding of the principles of gemmology
- Demonstrate a basic understanding of identifying properties of common gem materials



Results and grades

The pass grade for the final assessment is 80%. Students achieving less than 80% may retake the assessment until they achieve the 80% pass mark.

A Level 2 Award in GemIntro will be awarded to qualifying candidates.

Further information

- Gem-A's privacy notice is available to view online www.gem-a.com/privacy-policy

For further information relating to any of Gem-A's courses please contact education@gem-a.com or go to www.gem-a.com.