# ALL ABOUT OPAL

After two years of development, the Gemmological Association of Australia (GAA) has launched a comprehensive online course on opal, entitled *GAA CERTIFICATE IN OPAL STUDIES.* Below is a brief overview of the course.

*Review by Cynthia Unninayar*

The tone of the course is set with the opening phrase: *You are about to embark on a journey into the unique world of opal.*

And what a fascinating journey it is! For anyone wanting to learn all about these remarkable, magical, and even mysterious gemstones, this is a truly comprehensive course. Composed of eleven progessive modules, replete with beautiful photos and clear illustrations, it is well laid out and easy to follow. The course will only be available online and is designed to achieve 19 specific goals that allow the participant to be able to:

- Inspect an object and identify whether or not it is opal;
- Inspect an opal and identify its type;
- Describe an opal using accepted standard terminology;
- Describe and identify opal composites/ synthetics/ treatments/simulants;
- Describe factors affecting an opal's value;
- Know how to handle, store, and care for opal and opal jewelry;
- Inspect an opal and describe the evidence for its likely place of origin;
- Have knowledge of major Australian opal-producing areas and opal types produced;
- Have knowledge of ethical opal supply chains;
- Have knowledge of considerations in designing and setting opals in jewelry;
- Have knowledge of the occurrence and significance of opalized fossils;
- Have knowledge of major non-Australian opal-producing areas and opal types produced;
- Explain the causes of the play of color in opal;
- Describe and test for the gemological properties of opal;
- Understand and describe methods for processing opal (cutting, carving, inlay, composites, faceting, beads, etc.);
- Know principles for assessing a parcel of rough Australian opal for purchase or processing;
- Understand and describe the geology and formation of opal;
- Discuss opal folklore and history of major opal mining locations;
- Have knowledge of opal prospecting and mining methods in different locations.

*Above photo: Example of a Boulder opal from Queensland, Australia.*





While the course is quite thorough and even rigorous, it is also flexible. Participants can work through each module at their own pace, stopping and starting as often as necessary.

To ensure an understanding of the topics, each module has a *test* at the end, which the reader must pass in order to continue to the next module. In every module, however, the reader can revisit previously viewed content at any time.

In the introduction, the course includes a glossary of terms, a list of opal articles printed in *The Australian Gemmologist* from 1951 to 2023, a list of opal classification, and a chart of opal properities.

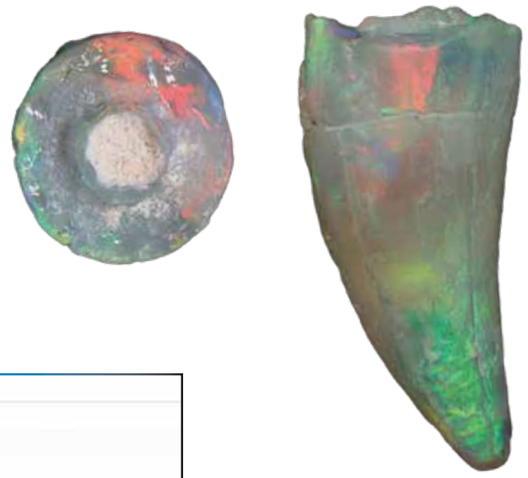
**Module 1** explores the fundamental properties, rich history, and unique significance of opal as a gemstone. It distinguishes between precious opal and common opal, illustrates the various patterns and plays of color, and discusses opal composites and manufactured opal.

**Module 2** explains the classification and characteristics of opal and the various standards and modalities that have been adopted to distinguish opal types.

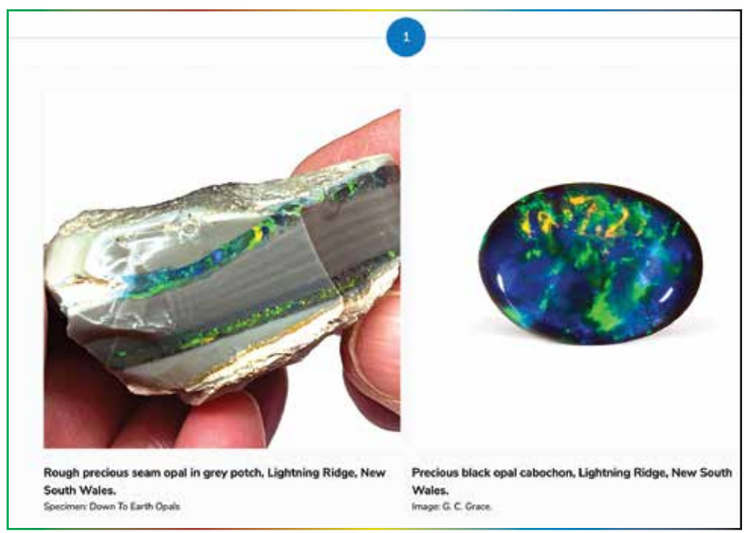
**Module 3** delves into how opal is formed and the environmental factors that must come together to create this unique gemstone. These include hydrous silica, water to dissolve and transport the silica, a depositional site for the opal to form and a method to reach the site, as well as a way to come out of solution and form opal.

**Module 4** offers insight into the fascinating phenomenon of fossils preserved in opal, most of which are found in Australia. These rare and valuable fossils form in ways similar to other fossils, except that they are preserved in silica in the form of opal, while other fossils are generally preserved in minerals such as bioapatite, agate, pyrite or calcite.

*From Module 3. Flow structures in opal infilling a crack or narrow fissure in ironstone. (Image: T. Coldham)*



*From Module 4: Two views of an exquisite 10mm high 96-100 million-year-old opalized tooth from Lightning Ridge, possibly from a crocodile, preserved in solid crystal opal and preserving the internal pulp cavity. Donor: J. Fahey. (Image: Robert A Smith)*




*From Module 1: Example illustrating a rough precious opal in gray potch and a black opal cabochon, both from Lightning Ridge, New South Wales, Australia.*

*From Module 5: Examples of opal body tones. Top row, black opal; center, dark opal; bottom row, light opal. (Image: A. Smallwood)*

*From Module 6: A prospecting trench in the Coober Pedy opal fields.*

**Module 5** describes how opal is valued, for both precious opal and common opal taking into account such factors such as *body tone*, *play of color, patterns, origin, diaphaneity, etc*. Fire opal and carvings are also featured.

**Module 6** offers an introduction to the different Australian mining areas and their history, with an overview of opal prospecting and the different techniques used to locate opal deposits.

**Module 7** goes into depth on where opal is found around the world, e.g. Brazil, Central and North America, Ethiopia, Indonesia, Mexico, Madagascar, Peru, Slovakia, etc., as well as important opal fields in different areas of Australia.

*From Module 7: Opal cabochons from Indonesia. (Image: J. Ivey)*

*From Module 7: Cabochon of Louisiana (USA) sand opal. (Image: Opal Auctions)*

*From Module 7: Examples of precious opal from White Cliffs, Australia.*





**Module 8** illustrates taking opal from rough to pre-cut to finished gem and the methodologies and processes involved as well as how to understand the stone and handle the rough. Featured are the planning and the tools and equipment involved, while taking into account the stone's yield and play of color.

**Module 9** offers tips and information about purchasing opal, what to buy, what to look for, and where to source, e.g. direct from the mine, rough dealers, trade shows, auctions, etc.

*From Module 9: Parcel of Queensland boulder rough opal showing potch and color.*

*From Module 8: Parcel of opal rubs [rough opal slightly worked to reveal color and other characteristics such as inclusions, the presence of potch, clay, and/or sandstone] from Lightning Ridge, NSW, Australia.*

*'Medusa's Sting,' a winning entry in the 2023 Australian Opal Awards. (Image: Cody Opal)*

**Module 10** covers the care and storage of opal, as well as considerations in designing and setting opal jewelry. This section details the importance of understanding the distinctive attributes of opal when designing a mounting. It also features a number of winning pieces from opal design competitions.

*From Module 10: Opal carving featuring an all-round bezel setting.*

**Module 11** addresses the important issues of ethics and corporate social responsibility in the opal supply chain with an emphasis on the Australian industry and what it is doing to ensure transparency and integrity in the sector. It also discusses reports and quality certificates.

In conclusion, the *GAA Certificate in Opal Studies* course is very comprehensive, well-written, and a great resource for anyone interested in understanding these remarkable gemstones. While it takes awhile to go through it, you can do it at your own pace and savor the beautiful images while learning all about opal.

*For more information regarding this online opal course, please scan this QR code, or contact The Gemmological Association of Australia at: http://gem.org.au/courses/opal-studies/*