

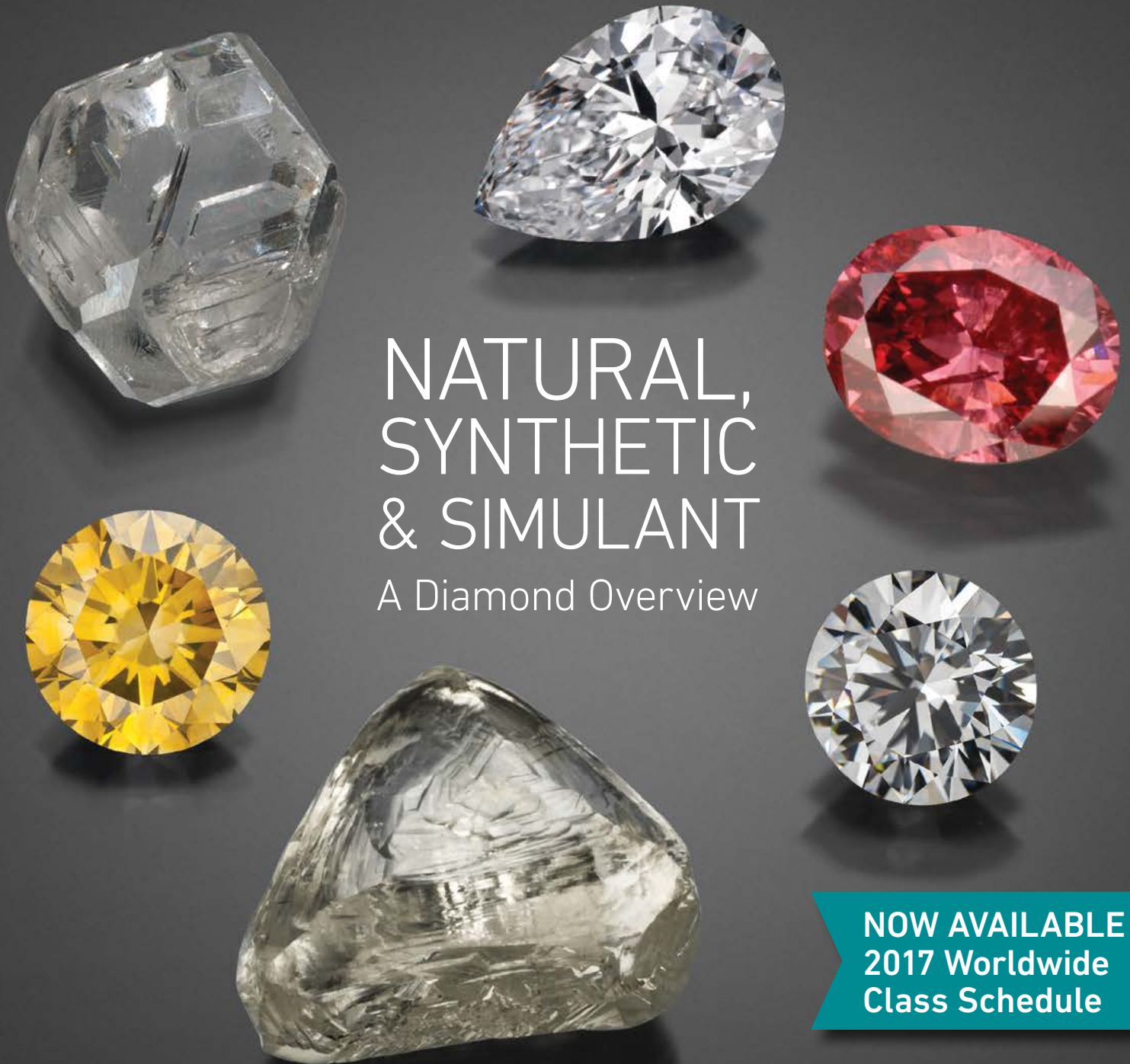


GIA®

FALL 2016

# EDUCATION

Quarterly



NATURAL,  
SYNTHETIC  
& SIMULANT  
A Diamond Overview

NOW AVAILABLE  
2017 Worldwide  
Class Schedule

# A Bright Future Is Waiting

Jewelry and watch sales in the United States reached \$40 billion for the first seven months of 2016, according to *Rapaport News*. That marked the ninth consecutive year-on-year increase since 2007.




This growth brings increasing opportunities for employment in the gem and jewelry industry for both established retailers and entrepreneurs. New gem discoveries and innovative jewelry

design and manufacturing techniques will continue to drive consumer demand for some of nature's most beautiful creations.

So what does that mean for you?

A GIA diploma can help you make the most of this bright future. Learn from the world's foremost leader in gemology and get ready to step into an exciting tomorrow.

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GIA is accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC). ACCSC's accreditation is institutional in nature and includes GIA's U.S. on-campus education only. GIA's Distance Education eLearning courses are accredited by the Accrediting Commission of the Distance Education Accrediting Commission (DEAC). GIA's lab classes do not fall within the purview of DEAC accreditation.



GIA's Carlsbad campus is approved to operate in California by the Bureau for Private Postsecondary Education.

GIA's New York branch campus is licensed by the State of New York Bureau of Proprietary School Supervision.

For information about graduation rates, graduated students' median debt, gainful employment and other information, visit [GIA.edu/student-consumer-information](http://GIA.edu/student-consumer-information)

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### GIA

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**Diamonds on the cover – clockwise from top left:**

- HPHT-grown synthetic diamond
- Pear-shaped natural diamond
- Oval, Fancy purplish-red natural diamond
- Round brilliant-cut cubic zirconia
- Rough natural diamond
- Round, Fancy Deep brown-greenish yellow diamond - Courtesy: Dr. Pericles John Lentz

## 26

Smartphone Hacks  
by Robert Weldon &  
Denise Conrad

Your smartphone's high-resolution camera is a capable tool for taking beautiful photos of gems and jewelry.

Brooch designed and gifted by Paula Crevoshay. Courtesy: GIA Collection



## 4

Sean Dunn

When Sean Dunn returned to help run his family's business, he reinvented the store into a successful online and brick-and-mortar retailer.



## 12

Trishala Ashok

Shark jaws, jelly fish tentacles and other unusual items. All have been Jewelry Design & Technology alumna Trishala Ashok's sources of inspiration.



## 8

Your Diploma.  
Your Career.

Explore four career opportunities in the gem and jewelry industry.



## 14

Diamonds

Wonder what the difference is between natural diamonds, synthetic diamonds and diamond simulants? We share essential information about this hot topic.

+1 800 421 7250 ext 4001

# Sean Dunn

## Embracing Risk

Avid surfer Sean Dunn, GIA GG, knows that business can be a lot like the perfect wave: sometimes opportunity strikes and you have to jump in. While many independent retailers struggled with their online strategy in the early 2000s, Dunn chose not to play it safe with his family's Florida-based business, J.R. Dunn Jewelers. He dove head first into the world of e-commerce, leading the store to increased success and industry acclaim.

### Finding his way to GIA

After college, I saw that my buddies weren't finding jobs they loved, and my dad said, "Why don't you take your surfboard and drive across the country to California and learn about diamonds and gemstones and see how you like it?" I loved the entire GIA experience. The instructors were so passionate, and that inspired me.

### Early career

My parents wanted me to know hard work – I worked in marine construction in high school, and after graduating from GIA, I looked for outside experience. At GIA's Career Fair, I talked with amazing companies like Robbins Brothers, Sotheby's and Ben Bridge Jeweler. I was fortunate to be hired by Ben Bridge, and it was a terrific experience that provided a strong foundation for me.

### The edge of a GIA GG diploma

Nothing can beat the head start GIA gives you – having your GG allows you to hit the ground running. I had something to offer right off the bat, and had the confidence to start selling big diamonds very early on. When you join a family business, you'll always have to work hard to earn your coworkers' respect, but having your GIA GG gives you the right raw materials to work with.

### Prepared for competition

Early in my career, we began feeling competition from online diamond sellers. It frustrated most retailers when customers came in with printouts of GIA Diamond Grading Reports. We welcomed the opportunity. We'd have a seat in our diamond room – where our

team's GIA diplomas are displayed – and I'd review reports with them. Being able to read the report and giving clients credit for doing their homework opened many doors for us.

### Success in e-commerce

We were one of the first independents to go full speed ahead with deploying our e-commerce site. The industry began taking notice of our success, and in 2015, *JCK* named J.R. Dunn its "Luxury Retailer of the Year" for "redesigning retail." We could never have imagined receiving an award for it more than a decade after we started.

### A day's work

My most important responsibility is to make sure our clients are happy, and address areas where we fall short in a swift, meaningful way. I love being surrounded by a passionate team that's pulling for the same goals. I thrive on new ideas, whether they're mine or not, and the chance to put them into play.

### Final thoughts

There are always challenges and opportunities. The sooner you jump on both, usually the better the outcome.



#### Sean Dunn, GIA GG

Owner  
*J.R. Dunn Jewelers*

#### Fun Facts:

**Hobbies:** Surfing and spear-fishing

**Favorite gem:** Paraíba tourmaline

**Favorite book:** *The Old Man and the Sea* by Ernest Hemingway

**Favorite TV shows:** Discovery Channel, nature survival shows, *Shark Tank*

**Favorite music:** Reggae

## GG GRADUATE GEMOLOGIST

### THE STEPPING STONE TO INDUSTRY SUCCESS

The gem and jewelry industry looks very different after you've earned your Graduate Gemologist diploma. Doors of opportunity open and your options multiply. The reason is simple: the GIA Graduate Gemologist diploma is the industry's most respected credential and shows your peers that you have an in-depth knowledge of gemology.

### PROGRAM AT A GLANCE

The Graduate Gemologist diploma program will cover:

- Developing in-depth, hands-on experience with the GIA International Diamond Grading System™ and the GIA-created 4Cs (color, clarity, cut and carat weight) and learning how they affect diamond value
- Grading diamonds in the D-to-Z color range consistently and accurately
- Using gemological equipment and procedures to grade and identify hundreds of gems
- Explaining the GIA Colored Stone Grading System and evaluating gem quality
- Identifying and grading common and unusual colored stones
- Identifying the characteristics of simulants and treatments, and when advanced testing is required
- Translating technical knowledge into valuable information for effective sales and excellent service
- Discovering the vast array of diamonds and gems, and following their paths from formation to marketplace

Full-time program offered at GIA campuses worldwide

See page 24 for additional information, tuition and fees

Courtesy:  
Steve Ulatowski,  
New Era Gems



Learn more about Sean and how e-commerce helped grow his family's jewelry business at [GIA.edu/sean-dunn](http://GIA.edu/sean-dunn)

# GD GRADUATE DIAMONDS

## DIAMONDS ARE A JEWELER'S BEST FRIEND

Diamonds are arguably the most important gemstone on the world market: This single gem accounts for over 40% of the total dollars spent on gem sales in the global gem and jewelry industry. Creating a career requires a comprehensive understanding of these prized beauties, and you'll learn all about them in Graduate Diamonds diploma program. There is no one better to teach you about diamonds than GIA, the creator of the 4Cs and the International Diamond Grading System™.

### PROGRAM AT A GLANCE

The Graduate Diamonds diploma program will cover:

- Developing in-depth, hands-on experience with the GIA International Diamond Grading System™ and the 4Cs (color, clarity, cut and carat weight) and learning how they affect diamond value
- Grading diamonds in the D-to-Z color range
- Detecting diamond synthetics, treatments and simulants
- Recognizing when advanced testing is required
- Speaking the language of diamonds confidently to customers, suppliers and vendors

Full-time program offered at GIA campuses worldwide

See page 24 for the program description



Round, Fancy Deep brown-greenish yellow diamond - Courtesy: Dr. Pericles John Lentz

# GCS GRADUATE COLORED STONES

## THE COLORS OF OPPORTUNITY

Walk the floor of any major gem and jewelry show, and you'll quickly see that buying and selling colored stones can be a rewarding career. Look more closely, and you'll see that some professionals specialize in just a single stone. Since there are 130+ types of gems, countless opportunities are waiting for you. Your colorful future starts with earning the Graduate Colored Stones diploma, where you'll learn about the "Big Three" (emerald, ruby and sapphire), and gemstones ranging from the popular to the obscure.

### PROGRAM AT A GLANCE

The Graduate Colored Stones diploma program will cover:

- Building a knowledge base about colored stones and the colored stone market
- Using gemological equipment effectively to identify gemstones
- Explaining the GIA Colored Stone Grading System and evaluating gemstone quality
- Recognizing how quality, rarity and color affect value
- Determining how market factors affect gem value

Full-time program offered at GIA campuses worldwide

See page 24 for the program description



Tanzanite rough and polished courtesy: Peter Pereira, Isle of Gems Co. Ltd.

# Mine to Market – Career Focus

From the purchase of rough gemstones to the sales of heirlooms and polished gems, this is the third and last article in this series on the many career opportunities in the global gem and jewelry industry.

## Sales of Rough



Businesses that cut and polish gems are always seeking new sources, so there are always opportunities for Graduate Gemologists in the sale of uncut and unpolished gemstones.

As a seller or buyer of rough, you might work for a gemstone cutter, a mine or yourself. You'll need an in-depth understanding of desired stones, follow changes in market prices, find new sources and build relationships with key individuals. You'll also need to travel to mines to get the best stones at the best price, and be ready for a fast-paced lifestyle.

A buyer/seller of rough can fashion a career around a particular stone or region of the world. You'll probably look for small stones sold in bulk, but are likely to get occasional requests to source something big or unusual.

In the rough marketplace, it is vital to be able to examine a rough specimen accurately, and determine the optimum yield and its value to the buyer once it's cut and polished.

***"Buying and selling is rewarding and can be quite lucrative. If you want to succeed, you need to keep up with new developments in treatments, mining and synthetics. You also need to follow the gem identification process, and never assume you know everything."***

Lonnie McCulloch, GIA GG  
Owner  
Intermountain Gemological Services

## Gem Identification



As treatments and synthetics become more widespread and sophisticated, so does the need for professionals who specialize in gem identification. You may work for a jeweler, a grading laboratory or even a pawnbroker.

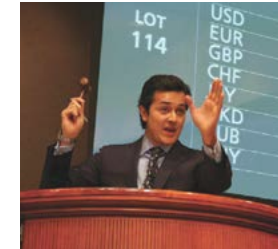
To succeed in this field, you'll need to be adept at using the tools of the trade: a loupe, microscope and more advanced testing technology. Just as important as your proficiency with these tools are your knowledge and experience. You'll need to continue your education by keeping up to date on important industry developments.

Patience and an ability to work with people from different cultures are also necessary. Proper gem identification is crucial for developing an accurate appraisal.

***"Being able to identify natural versus synthetic diamonds is something that is crucial. Identifying treatments in colored stones will always be a valuable skill."***

Tatiana Conte, GIA GG  
Director of Gemology and Design  
Diamonds International

## Appraisal and Auction



Love antique jewelry and the challenge of arriving at its value? Then you'll enjoy being an appraiser.

As an appraiser, your days will be spent identifying gems, their refractive indexes and stone setting techniques; and evaluating metals, hallmarks, stamps and maker's

marks to determine when the jewelry was made. And you'll use your knowledge and skills to weigh all these factors to arrive at a fair price. Also important is the ability to be sensitive to the needs of each customer, particularly when dealing with items such as heirlooms or famous pieces.

Auction houses also offer numerous employment opportunities for gemologists: cataloging jewelry for auction and estate appraisals, working on condition reports for lots offered at sales, and assisting specialists and senior colleagues with client appointments and visits.

***"Working in an auction house, I have the opportunity to see some of the world's finest jewels and meet great collectors worldwide. GIA is a good place to learn the 4Cs of diamonds and identification of colored gemstones, and a GIA education is essential to succeed in this industry."***

Rahul Kadakia, GIA GG  
Senior Vice President  
International Head of Jewelry  
Christie's

## Starting Your Own Business



Many in the gem and jewelry industry dream of working for themselves, and go on to start successful ventures.

New businesses can start anywhere along the path from mine to market. Possibilities include opening a retail store, design house, appraisal

business, gem wholesaler and more. Opportunities are only limited by your resources and imagination.

If you want to be an entrepreneur, you'll need to be self-motivated. You'll also need to wear lots of different hats – you may be a salesperson in the morning, a customer service rep in the afternoon and a bookkeeper at the end of the day. You may be an expert in gemology or jewelry design but will need to know when to turn to others with expertise in unfamiliar aspects of the business such as marketing and finance.

Honesty is an essential character trait. So is a tireless work ethic. You'll also need confidence in yourself and the unique value of your products and services.

***"GIA is an ideal place to start out in the jewelry industry. Previous industry experience is also very helpful. If you have both, you can make your way."***

Eugene Notovich, GIA AJA, Comprehensive CAD/CAM for Jewelry Certificate, Jewelry Design Certificate  
Edward Notovich, GIA Alumnus  
Owners  
Bravo Jewellers

### GEM DISCOVERY

Rough buyers go to exotic locales in search of gemstone deposits.

### SALES OF ROUGH

Brokers, dealers and cutters sell parcels of rough to wholesalers.

### GEM IDENTIFICATION

Lab professionals identify, analyze and grade gems.

### CUSTOM DESIGNING

Designers create jewelry using old-world techniques and cutting-edge technologies.

### GEMS BECOME JEWELRY

Bench professionals turn raw materials into exquisite adornments.

### APPRAISAL AND AUCTION

Appraisers determine the value of jewelry, while auctioneers sell notable pieces.

### GEM AND JEWELRY SALES

Sales professionals help customers find the perfect piece for that special moment.

### STARTING YOUR OWN BUSINESS

Entrepreneurs start companies all along the gem and jewelry pipeline.



Download Issues of the 2016  
GIA Education Quarterly at  
[discover.GIA.edu/EQ](http://discover.GIA.edu/EQ)

GIA career resources  
help you every  
step of the way

- Gem & Jewelry Career Center - Search Jobs - [GIA.edu/gem-job](http://GIA.edu/gem-job)  
- Career Fair - Meet Recruiters & Get Advice - [GIA.edu/career-fair](http://GIA.edu/career-fair)  
- Alumni Association - Build Your Network - [GIA.edu/gia-alumni](http://GIA.edu/gia-alumni)  
- Continuing Education - Sharpen Skills - [GIA.edu/gem-continuing-education](http://GIA.edu/gem-continuing-education)

# Where Gemology and Jewelry Design & Manufacturing Come Alive

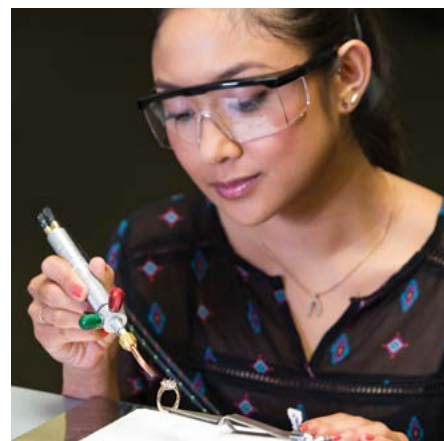
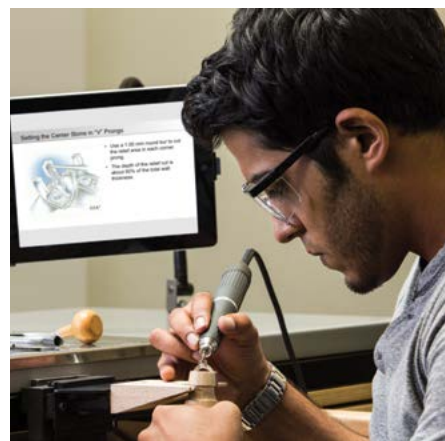
Come to a GIA campus, and step into the exciting worlds of gemology, and jewelry design and manufacturing. Your time at GIA will be a transformative one. You'll immerse yourself in classwork that fires your imagination and prepares you for professional success. You'll learn in an environment as stunning as the subject matter. You'll make lifelong friends. And you'll create a professional network that circles the globe.

Studying at GIA is your opportunity to learn at the educational hub of the gem and jewelry industry – a place where the 4Cs and other international standards were created, where the science of gemology continually advances and where jewelry design and bench skills come alive. Study with us and experience the essence of the industry. And while you're learning, get ready to make friends and acquaintances who will enrich your personal and professional life.

A GIA campus is where you'll learn from leaders in their respective fields. It means having access to groundbreaking research. When you learn from the world's foremost authority on diamonds, colored stones and pearls, you'll get one of the finest educational experiences available in the industry. You'll have a diploma that is recognized and respected everywhere.

Since every GIA campus delivers the same comprehensive curriculum, you can be confident that you'll get the same unmatched education, no matter which campus you attend.

Once you graduate, you'll find that your GIA diploma can open doors of opportunity. Many of your fellow alumni hold influential positions all along the gem and jewelry pipeline, and you'll have the knowledge and credentials to take your place beside them. Some of the companies where they work include: Ben Bridge Jeweler, Cartier, Christie's, David Yurman, Green Lake Jewelry Works, Helzberg Diamonds, Jewelry Television, Sotheby's, and Tiffany & Co.



## GIA in Carlsbad – The Heart of the Institute

Ask anyone who has attended GIA in Carlsbad, and they're likely to share similar impressions. They'll rave about the amazing learning experience, the expertise of the instructors, and how students have an incredible opportunity to make friends and build a powerful professional network while enjoying breathtaking ocean views from a beautiful campus.

Coming to GIA is an opportunity to network with tomorrow's leaders – your fellow students. It's a chance to build lifelong connections in the gem and jewelry industry that will help you every step of your professional journey. You'll have numerous opportunities to attend guest lectures, meet with industry VIPs and participate in other special events that come with being a GIA student.

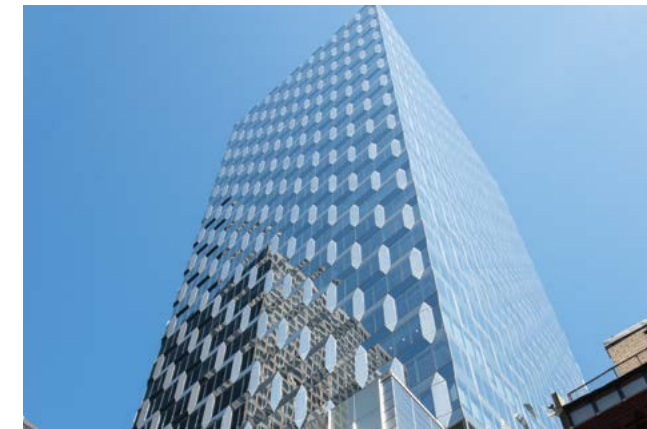


The Carlsbad campus is home to the world's largest gemological library, the Richard T. Liddicoat Gemological Library & Information Center. The library houses a growing collection of more than 57,000 books, 700 international journals, over 175,000 images, more than 1,900 videos and the Cartier Rare Book Repository and Archive.

The Carlsbad campus also has a stunning collection of gems and jewelry. Some are displayed in museum exhibits, while others may be available for closer examination in the classroom.

### We're here to cultivate your growth and success.

No matter which GIA campus you go to, you'll find staff and faculty committed to your academic and professional success. GIA supports you each step of the way with a variety of student services: information on housing and hotels, career planning and more. For more information on how to make your learning experience at a GIA campus a success, contact Admissions at [admissions@gia.edu](mailto:admissions@gia.edu) or call +1 800 421 7250, ext 4001 or +1 760 603 4001.



## GIA in New York at the International Gem Tower

In the heart of New York's Diamond District glitters the International Gem Tower (IGT), a 34-story state-of-the-art building that is GIA's home in the city. With 90% of the diamonds entering the U.S. going through the Diamond District, IGT and GIA are literally at the center of the industry.

GIA's laboratory, research facility, and campus occupy almost 100,000 square feet on four floors of IGT, with an entire floor devoted to education. Here you'll find gemology and jewelry design classrooms that optimize the learning experience and encourage networking among students and faculty.

The New York campus' branch of the Richard T. Liddicoat Library houses books and magazines to broaden your knowledge and a quiet spot to study. The Bert Krashes Study Lounge is another spot to study or to catch up on the latest industry news, graduations, meetings and events, is also an ideal place to relax, refresh and recharge; or just enjoy the 18-foot-long exhibit case sparkling with treasures from GIA's museum collection.

New York students enjoy an abundance of professional opportunities to help jumpstart their careers. The NY Metro GIA Alumni Chapter hosts ten events per year. The biannual Women's Jewelry Association (WJA) runs mentoring sessions. The New York campus also conducts student tours to the local Diamond Dealers Club. Comprehensive CAD/CAM and Jewelry Design & Technology students visit nearby engineering and casting facilities to view manufacturing processes.

# Trishala Ashok

## Unusual Inspiration

It's easy to imagine that the red carpet inspired Jewelry Design & Technology (JDT) alumna and multiple award-winning jewelry designer Trishala Ashok. But truth can be stranger than fiction: her love affair started when she was eight-years-old, looking at the craft bins at a department store while on a family vacation to the United States.

### Early experiments in jewelry

I picked up a lot of beads, Sculpey polymer clay, Shrinky Dinks and wires to make jewelry for family and friends. As I got older I would sell jewelry to boys who wanted to gift something to their girlfriends. I used to think every stone was a precious gem if you cut it and gave it facets.

### Finding GIA

I read about GIA in a newspaper. After I earned a bachelor's degree in media studies from the Center for Management Studies in Bangalore, India, I worked as a social media manager for a luxury boutique in Bangalore while GIA was processing my application.

### The JDT experience

The only thing I would do on my computer was check emails, so learning Rhino and Matrix 7.0 design software was really new for me. Now when I open the software, my hands do all the work. I know where every tool is and what all of the keys are for. It's like riding a bike – you never forget it.

### The value of a GIA education

I am who I am because of my experience at GIA. I knew nothing about jewelry design before GIA – all I knew was how to string a fancy bead onto a bracelet. At the end of my JDT program, I surprised myself. I was happy to see what I'd learned and achieved in those six months.

### Spreading knowledge

I have recommended GIA to many students back home in India. When they're done with their program, the first thing they do is email me and thank me for recommending GIA to them.

### Success since graduation

I started a label, WANSH, and almost immediately began winning design awards, including from direct-to-consumer fine jewelry brand Mejuri, and Gem Privé, a design contest platform.

### Design philosophy

The essence of WANSH is the notion of inspirational design – the ability to look through the mundane, the unexpected, the minutiae of daily life and create something beautiful. I try to follow the words of *Vogue's* creative director Grace Coddington: "Always keep your eyes open. Keep watching. Because whatever you see can inspire you."

It's one of my favorite quotes because it describes me as a designer. I've made pieces inspired by outrageous things – shark jaws, jelly fish tentacles, spaceships. My favorite ring was inspired by a vase that I came across while watching the show *Modern Family*.

### Final thoughts

The best thing to do is to be true to yourself as a designer. Your brand and your designs should reflect your personality.



## JEWELRY DESIGN & TECHNOLOGY

### DESIGN YOUR FUTURE

As new technologies come to market, the jewelry industry evolves to take advantage of them – and it affects everything from the design of a piece to its manufacture. Knowing how to use the latest tools and technologies is essential for the aspiring designer. The Jewelry Design & Technology diploma program teaches you the latest jewelry engineering CAD/CAM programs, manufacturing processes, 3D printers, the elements of design and more.

### PROGRAM AT A GLANCE

The Jewelry Design & Technology diploma program will cover:

- Using fundamental design concepts, including texture, shape, form, balance, negative space, color and more
- Applying jewelry engineering concepts to make durable and comfortable pieces that are long lasting
- Creating, rendering and printing designs using CAD software like Rhinoceros 3D, Matrix, T-Splines, V-Ray rendering and Computer-Aided Manufacturing (CAM) hardware like a 3D printer
- Designing and developing CAD models using the metrics of scale, proportion and element relationships, and within the constraints of cost, time, size, style and manufacturing methods
- Selecting appropriate precious metals and gems based on engineering, design and manufacturing considerations
- Determining optimal manufacturing processes for the creation of jewelry, like die striking, machine making and casting
- Inspecting designs and prototypes to ensure proper engineering and that they meet GIA Quality Assurance Benchmarks
- Developing digital and physical portfolios of class projects and custom designs that are ready for presentation to potential clients and employers, and displaying work in a final design exhibition

Full-time program offered at GIA campuses in Carlsbad and New York  
See page 25 for the program description.

**Trishala Ashok, GIA JDT**  
Founder/Designer  
WANSH Fine Jewelry

#### Fun Facts:

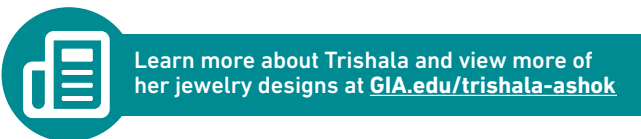
- Hobbies:** Healthy baking, wildlife conservation and photography
- Favorite gem:** Opal
- Favorite book:** *The Sisterhood of the Traveling Pants* by Ann Brashares
- Favorite movie:** *The Jungle Book*
- Favorite musician:** Michael Jackson



Designed by Trishala Ashok  
GIA Jewelry Design & Technology Graduate



See GIA Jewelry Design & Technology students showcase their portfolios before graduation at their final design exhibition.  
[GIA.edu/jdtvideo](http://GIA.edu/jdtvideo)



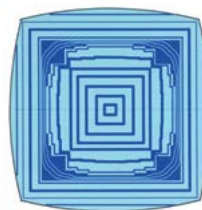
# Diamonds: Natural, Synthetic & Simulant

## NATURAL DIAMONDS

One of nature's wonders: billions of years old, made of a single element (carbon) and created deep in the earth under extreme pressure and high temperature. This intense geothermic journey produces the hardness and optical properties that we value in a cut and polished diamond.



Natural diamond rough and polished

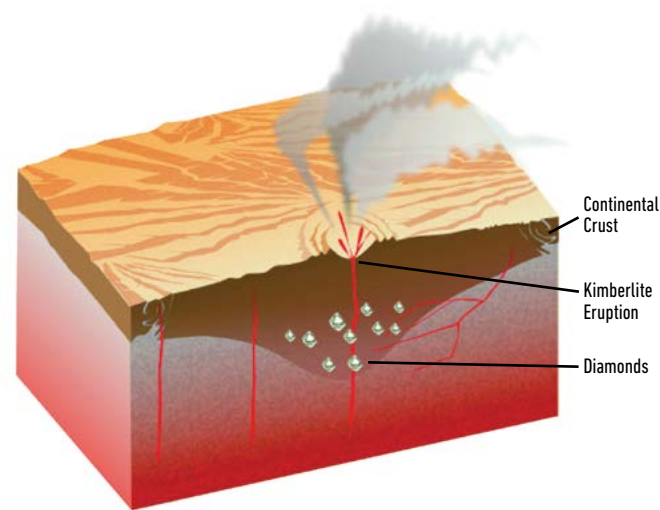


Cross section of a natural diamond. When natural diamonds fluoresce, they show concentric growth patterns from a central core.

Formed deep below the earth's surface, diamonds were brought upwards by volcanic eruptions. Two types of volcanic rock, kimberlite and lamproite, sometimes carried diamond rough with it. Over time, volcanoes eroded and diamonds weathered out of the host rock, and collected in alluvial deposits in riverbeds.

Until the 1800s, the extreme scarcity of diamonds made them an object only for the elite. With the discovery of large kimberlite and pipes (remnants of old volcanoes) in South Africa in the 19<sup>th</sup> century, mining began on an industrial scale, increasing supply to meet broader consumer demand. Diamonds are now mined in several countries around the world including Australia, Botswana, Canada, Russia and South Africa.

Diamond mining is an expensive undertaking. The average yield in most diamond mines is one part diamond to one million parts host rock. Mining companies then either sell the rough diamonds to diamond manufacturers who cut and polish the stones.



Continental Crust  
Kimberlite Eruption  
Diamonds

For a more in-depth look into the science of identifying synthetic diamonds go to [GIA.edu/identifying-lab-grown-diamonds](http://GIA.edu/identifying-lab-grown-diamonds)

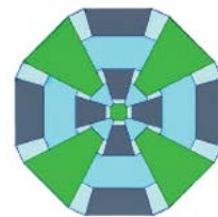
Diamond octahedral crystal in kimberlite matrix. South Africa. Weight in matrix is 314.47 ct

## SYNTHETIC DIAMONDS

Synthetic diamonds are grown in a laboratory and share essentially the same chemical composition, crystal structure and physical properties of natural diamonds.



HPHT diamond rough and polished



Cross section of a HPHT diamond. They have a crossed-shape fluorescence pattern.

Produced for industrial purposes since the 1950s, synthetic diamonds have been used in a wide variety of applications: telecommunications, laser optics, healthcare and more. In 1971, researchers at General Electric created the first, small, gem-quality diamonds.

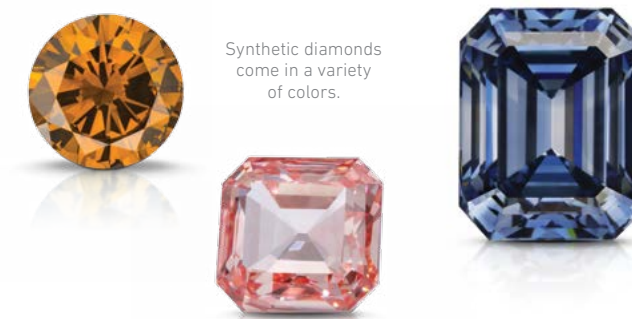
By the mid-1980s, synthetic diamond manufacturers were able to grow some diamond crystals that could be faceted and used in jewelry. Initially they were mostly small and yellow in color, but the quality steadily improved and colorless synthetic gem-quality diamonds are now available.

Synthetic diamonds are produced in two ways:

- 1. High Pressure, High Temperature (HPHT):** A synthetic diamond is produced in a laboratory by mimicking the high-pressure, high-temperature conditions of natural diamond formation in the earth. The result is a distinctive crystal shape that is a combination of octahedral and cube faces and a flat base.
- 2. Chemical Vapor Deposition (CVD):** In this method, a synthetic diamond is produced in a laboratory utilizing carbon-rich gas subjected to high temperature under vacuum. The CVD process involves the decomposition of methane gas at high temperature but low pressure, which produces carbon atoms. This results in a square-shaped, tabular synthetic diamond crystal.

Because the optical and physical properties of today's synthetic diamonds are nearly identical to those of natural diamonds, identifying synthetic diamonds is complex. Only a gemological lab with equipment that allows for advanced testing techniques can make an authoritative determination if a diamond is natural or synthetic. However, in the absence of advanced testing techniques, gemologists can look for growth patterns, metallic inclusions (internal clarity characteristics) and unusual fluorescence colors and patterns. Synthetic diamonds will not have included minerals like garnet, diopside or even another diamond.

How does a consumer know what they are buying? The U.S. Federal Trade Commission Guidelines for the jewelry industry state that synthetic gemstones must be disclosed as such and cannot be described as natural, real or genuine.



Synthetic diamonds come in a variety of colors.

## DIAMOND SIMULANTS

Since ancient times, various materials have been used as imitations or substitutes for diamonds.

These diamond simulants may be natural or man-made but do not share the chemical composition or physical properties of natural and synthetic diamonds.

Common simulants include colorless sapphire, colorless zircon, synthetic cubic zirconia (zirconium oxide, CZ) and synthetic moissanite (silicon carbide). A trained gemologist should be able to determine that a stone is a simulant and not a natural/synthetic diamond using several tests including thermal conductivity and by observing optical properties under magnification.



Cubic zirconia rough and polished



The Mohs scale measures relative gem hardness. This graph shows the hardness of natural/synthetic diamonds compared to common diamond simulants.

Advances in technology continually reshape the diamond industry. Take your place in this fascinating world with a Graduate Gemologist diploma from GIA, the world's foremost authority in gemology.

Learn more at [GIA.edu/gem-education](http://GIA.edu/gem-education)





"Although synthetic diamonds may exhibit distinctive visual features that a gemologist can look for, in many instances positive identification requires the use of scientific instrumentation found in a major gem-testing laboratory."

*Dr. James Shigley*  
*GIA Distinguished Research Fellow*



GIA has been researching natural diamonds, synthetic diamonds, and simulants for more than 60 years to educate the industry and protect the gem-buying public. GIA's research is published on GIA.edu and in *Gems & Gemology*, GIA's quarterly peer-reviewed journal. GIA also offers products and services such as DiamondCheck™ and its Melee Analysis Service to identify and separate natural diamonds from synthetics and diamond simulants.

## GJ GRADUATE JEWELER

### PRECIOUS SKILLS FOR PRECIOUS WORK

Learn how to forge and fabricate jewelry using gold, silver and platinum. Restore the luster to a family heirloom. Repair a favorite necklace. You'll learn how to tackle these challenges using old-world craftsmanship and the latest technologies taught in the Graduate Jeweler diploma program.

#### PROGRAM AT A GLANCE

The Graduate Jeweler diploma program will cover:

- Making and repairing jewelry in a sustainable manner in a quiet, clean and modern environment in a fully equipped classroom that includes a laser welder
- Setting a variety of stone shapes, including round brilliant ovals and princess-cut stones, in mounting styles to include channel setting, bezel setting and prong setting, in sterling silver, white gold, yellow gold and platinum
- Determining when to alter, repair, or reconstruct jewelry
- Performing the most common jewelry repairs, alterations and reconstructions, such as sizing rings, rebuilding prongs, refinishing worn jewelry, repairing broken chains and strengthening old jewelry by installing new settings
- Applying both textured and polished finishes to jewelry surfaces on a variety of different metals
- Using fabrication and forging techniques, and laser-welding technology for gold, silver and platinum
- Evaluating and improving workmanship by using GIA Quality Assurance Benchmarks

Full-time program offered at GIA in Carlsbad  
 See page 25 for the program description.

See GIA Graduate Jeweler students tackle the "Halo ring" project in 14K gold.  
[GIA.edu/gjvideo](http://GIA.edu/gjvideo)



## CCC COMPREHENSIVE CAD/CAM FOR JEWELRY

Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM) is the industry standard for designing and manufacturing quality jewelry. Topics covered in the course include turning designs into CAD models, creating photorealistic renderings, and then into casting-ready models. With the Comprehensive CAD/CAM for jewelry certificate, you'll have a skill set both coveted by employers and vital to starting your own design business.

See page 20-22 for course schedules.

#### COURSE AT A GLANCE

The Comprehensive CAD/CAM course will cover:

- Creating CAD models within the metrics of proper engineering, scale, proportion and element relationships
- Developing CAD models within the constraints of cost, time, size, style and manufacturing methods
- Distinguishing between various CAD software, including Rhino and Matrix; and various CAM methods, including 3D printing
- Modeling and rendering manufacturable pieces of jewelry using CAD/CAM and displaying them in a final CAD exhibition

Full-time program offered at GIA campuses worldwide  
 See page 25 for the course description.

## JD JEWELRY DESIGN

The ability to take an inspiration and turn it into a multi-view watercolor rendering is a skill valued by fine jewelry houses and vital for jewelry design entrepreneurs. The Jewelry Design certificate course covers jewelry design theory, artistry drafting techniques, and how to render faceted gems, diamonds and pearls. You'll also learn how to illustrate the shape, form, and texture of yellow and white metal and more. When you graduate, you'll have a portfolio of work that is sure to impress.

See page 20-22 for course schedules.

#### COURSE AT A GLANCE

The Jewelry Design course will cover:

- Learning rendering for yellow and white metals, as well as faceted and cabochon gemstones and pearls
- Illustrating rings and other pieces of jewelry
- Learning about sources for jewelry design inspiration and developing motifs to create jewelry objects
- Rendering jewelry designs using drafting tools for display as a participant in the final class design exhibition
- Creating a portfolio of class projects and custom designs that is ready for presentation to potential clients and employers

Full-time program offered at GIA campuses worldwide  
 See page 25 for the course description.

## JEWELRY MANUFACTURING ARTS LAB CLASSES

See page 20 for the lab class schedule.

#### JMA 320L BASIC REPAIR AND SETTING LAB

This class teaches basic repair and setting skills through hands-on training at your own fully equipped workbench. Instructors cover how to create, recognize and evaluate quality craftsmanship using GIA's Quality Assurance Benchmarks, identify and set basic mounting styles, size rings, tighten stones, re-tip and replace prongs, assemble and solder settings and shanks, work with sterling silver and white and yellow karat gold, and apply rhodium plating. Class content also includes an overview of finishing skills for specific colors of metals, basic laser-welding techniques and applications. Upon completing the class, you will also keep digital course materials for future reference.

Class Duration: 5 days  
 What You Earn: Letter of Completion  
 Tuition: \$1,450 (Carlsbad)  
 Books & Materials: \$100  
 Total Charges: \$1,550 + applicable sales tax

Note: Tuition and Fees subject to change

#### JMA 340L INTERMEDIATE REPAIR AND SETTING LAB

Prerequisite: JMA 320L or previous bench experience including basic stone setting and soldering

Through personalized instruction, integrated text and video, and exercises at your own workbench, you'll practice intermediate and some advanced gem-setting techniques, remounting stones in intricate styles, and crafting a variety of prong shapes for center stones. Instructors also teach setting fancy shapes in bezels and prongs; melee in halo designs; and princess cuts in channels, bezels and prongs. The class will also cover efficient methods for settings in shared prong mountings and in pieces produced with Computer-Aided Manufacturing (CAM) technology – and the techniques for precious metal conservation and best practices for preparing metal for refining. GIA provides all tools and materials for you to work with, including white and yellow karat gold and sterling silver. Upon completing the class, you will also keep digital course materials for future reference.

Class Duration: 5 days  
 What You Earn: Letter of Completion  
 Tuition: \$1,450 (Carlsbad)  
 Books & Materials: \$100  
 Total Charges: \$1,550 + applicable sales tax

# Meet Your Instructors GIA in New York

GIA instructors are an impressive group: they are accomplished industry veterans with diverse backgrounds, each bringing a unique perspective to the classroom.

## Maria Tsangaropoulos – Jewelry Manufacturing Arts

Maria's love for jewelry and the visual arts began in high school. It burned bright through college, where she earned a degree in metalsmithing and jewelry, and it fueled her ambition during her 40 years in the industry. Maria's professional travels included an apprenticeship with a master goldsmith and stints as a model maker, a sample maker, and executive positions where she was in charge of product development and engineering.



*"GIA is one of the notable institutions in the industry – a place where you'll get a great education, meet students from all over the world, and make professional contacts. And studying in New York, where the industry has such a strong presence, creates excellent career opportunities."*

## Craig Nass, GIA GG – Gemology

A fourth-generation jeweler, Craig grew up in a family that lived and breathed gemology. Gems were a common topic around the table; family vacations were to national parks to learn about geology. After attending the University of Southern New Hampshire, Craig earned his GIA Graduate Gemologist diploma and worked for GIA. He then held a variety of positions at flagship retail brands and gem wholesalers. But GIA always beckoned, and Craig eventually returned to teach gemology. A trademark of his classes: At the end of each day, Craig asks his students what they learned, and then shares practical applications so it can be used outside the classroom.



*"This is not just a job for me. It's an opportunity to excite others and to share my passion with those who are interested in the things I love."*

## Cristiano Brigida, GIA GG – Gemology

Cristiano brings a wealth of academic and practical knowledge to the GIA classroom. After earning a masters of science in geology, Cristiano was hired by a mining company where he helped search for metals and gold in the North Western Territories, Canada. Cristiano then earned his Ph.D. in experimental petrology (a branch of the field of geology), spoke at international conferences, published peer-reviewed papers in trade magazines, and taught science and math. While teaching, he earned his GIA Graduate Gemologist diploma, and worked as a gem buyer for eight years, traveling to Thailand, Madagascar and India. Now he is thrilled to teach the "most beautiful part of earth materials."



*"I love teaching because I can make a difference in someone else's life. Just as my teachers helped me create my career, I hope to do the same for my students."*

## Antar Gamble Hall – Jewelry Manufacturing Arts

Antar started making beaded jewelry in high school, and his interest continued while in college. After graduation, he worked as a freelancer and in-house designer at several Manhattan jewelry houses, and as a Rhino CAD instructor. One of his more recent accomplishments was creating the winning 3D-printed Christmas ornament for a design challenge sponsored by the White House. Antar prides himself on taking complex CAD modeling topics and explaining them in easy-to-understand terms.



*"The GIA classroom is exciting and dynamic. You meet students from all over the world with varying degrees of jewelry and CAD experience. It is a chance to educate and inspire."*



GIA CAMPUSES: CARLSBAD, NEW YORK, BANGKOK, BOTSWANA, HONG KONG, LONDON, MIDDLE EAST (DUBAI), MUMBAI AND TAIPEI\*

# Kickstart Your Career With a GIA Scholarship

**ONE APPLICATION**  
Gets you considered for all appropriate scholarships

**Scholarships Available for all GIA Education Courses**

- ON-CAMPUS GEMOLOGY
- DISTANCE EDUCATION
- ON-CAMPUS JEWELRY MANUFACTURING ARTS
- LAB CLASSES

**WHEN TO APPLY**

June to Dec 2017 Course Enrollments  
Apply February 1 through March 31, 2017

2018 Course Enrollments  
Apply August 1 through September 30, 2017

## TIPS FOR COMPLETING A SUCCESSFUL APPLICATION

**FAN MAIL**  
One Letter of Recommendation

Know a boss, co-worker or client who thinks the world of you? Ask him/her to tell us about the qualities that make you so special – and why you deserve a GIA scholarship.

A teacher, a member of the clergy, someone from a community organization you belong to can also write a recommendation for you. Sorry – no friends or family.

Writing a letter of recommendation takes time and forethought. Be sure to give the writer sufficient time. Ask sooner rather than later.

**HELLO**  
Tips for Your Essay Questions

- We want to know why gemology or jewelry manufacturing arts fires your spirit.
- Tell us how a GIA scholarship will help you reach your professional goals.
- Share with us your past achievements and how you can contribute to the gem and jewelry industry.

Before you start the application, organize and prepare your thoughts. Write a sentence or two for topics like these.

Share your story with us. We're eager to read it.

**???**  
**QUESTIONS?**  
We're here to help. Just email us at [scholarship@gia.edu](mailto:scholarship@gia.edu)



"I urge any prospective student who contemplates applying for a scholarship to do so. It was a minimal amount of time and work compared to the opportunities, both financially and professionally, I have received."

Natalie Tjaden, GIA GG  
Merchandising Assistant  
Jewelry Television (JTV)

Learn more about GIA instructors at the campus faculty pages on [GIA.edu](http://GIA.edu)

Get all the details and discover if there's a scholarship waiting for you at [GIA.edu/scholarships](http://GIA.edu/scholarships)

\*All applicants are eligible to apply for a distance education scholarship. U.S. citizens and U.S. permanent residents are eligible to apply for any on-campus scholarship for campuses in the U.S. Non U.S. citizens with country of residence outside the U.S. are eligible to apply for scholarships at GIA locations outside of the U.S.



# 2016 and 2017 U.S. Class Schedules

## ON-CAMPUS PROGRAMS

2017 dates are for courses starting Jan-Jun 2017.

Tuition, books and materials fees for 2017 programs, courses and classes may be different from 2016. Please refer to GIA.edu for the most up-to-date schedules, tuition and fees.

Unless otherwise noted, all classes are held at GIA facilities at the address shown on the back cover of the most current version of the [GIA Education Catalog](#) at [GIA.edu/education-catalog](#)

The start date shown for on-campus courses and programs is the mandatory orientation date.

GIA reserves the right to reschedule or cancel classes.

### CARLSBAD, CA

#### GEMOLOGY GEM 2500 Graduate Gemologist

2016  
Oct 13, 2016-May 19, 2017

2017  
Jan 12-Jul 28  
Feb 9-Aug 25  
Apr 6-Oct 20  
Apr 27-Nov 10  
May 25-Dec 15

#### GEM 2200 Graduate Diamonds

2016  
Oct 13, 2016-Dec 16, 2016

2017  
Jan 12-Mar 10\*  
Feb 9-Apr 7\*  
Apr 6-Jun 2\*  
Apr 27-Jun 23\*  
May 25-Jul 21\*

#### GEM 2300 Graduate Colored Stones

2016  
Oct 17, 2016-Mar 24, 2017  
Nov 28, 2016-Apr 28, 2017

2017  
Mar 13-Jul 28\*  
Apr 10-Aug 25\*  
Jun 5-Oct 20\*  
Jun 26-Nov 10\*

#### JEWELRY MANUFACTURING ARTS JMA 3400 Jewelry Design & Technology

2017  
Feb 23-Sep 1

#### JMA 3300 Graduate Jeweler

2016  
Oct 13, 2016-May 12, 2017

2017  
Jan 5-Jul 14  
Apr 6-Oct 13  
Jun 1-Dec 15

### JMA 370 Jewelry Design

2017  
Feb 16-Apr 21

#### JMA 400 Comprehensive CAD/CAM for Jewelry

2016  
Oct 23-Dec 15

2017  
May 4-Jun 23

### NEW YORK, NY

#### GEMOLOGY GEM 2500 Graduate Gemologist

2016  
Oct 13, 2016-May 19, 2017

2017  
Jan 5-Jul 21  
Mar 2-Sep 15  
Apr 13-Oct 27  
Apr 27-Nov 10  
Jun 22, 2017-Jan 26, 2018

#### GEM 2200 Graduate Diamonds

2016  
Oct 13-Dec 16

2017  
Jan 5-Mar 3\*  
Jan 12-Mar 10  
Mar 2-Apr 28\*  
Mar 23-May 19  
Apr 13-Jun 9\*  
Apr 27-Jun 23\*  
Jun 1-Jul 28  
Jun 22-Aug 18\*

#### GEM 2300 Graduate Colored Stones

2016  
Oct 17, 2016-Mar 24, 2017

2017  
Jan 2-May 19  
Mar 6-Jul 21\*  
May 1-Sep 15\*  
Jun 12-Oct 27\*  
Jun 26-Nov 10\*

#### JEWELRY MANUFACTURING ARTS JMA 3400 Jewelry Design & Technology

2017  
Jun 1-Dec 15

#### JMA 370 Jewelry Design

2017  
Jan 5-Mar 10

#### JMA 400 Comprehensive CAD/CAM for Jewelry

2017  
Mar 30-May 19  
May 25-Jul 14

### CLASS DURATION AND HOURS

#### Monday to Friday Day Classes

**Carlsbad and New York:**  
Schedules may vary depending on holidays, breaks or other events. Please visit [GIA.edu/class-duration-hours](#) or contact [admissions@gia.edu](mailto:admissions@gia.edu) for details.

#### Weekend and Night Classes

**New York:**  
Monday - Thursday: 6:00 – 9:30 p.m.  
Saturday: 8:00 a.m. – 4:00 p.m.



Polished gem courtesy:  
Bill Larson,  
Pala International

# 2016 and 2017 International Class Schedules

## ON-CAMPUS PROGRAMS

2017 dates are for courses starting Jan-Jun 2017.

Tuition, books and materials fees for 2017 programs, courses and classes may be different from 2016. Please refer to [GIA.edu](#) for the most up-to-date schedules, tuition and fees.

Unless otherwise noted, all classes are held at GIA facilities at the address shown on the back cover of the most current version of the [GIA Education Catalog](#).

The start date shown for on-campus courses and programs is the mandatory orientation date.

GIA reserves the right to reschedule or cancel classes.

### BANGALORE [GIAindia.in](#)

#### GEMOLOGY GEM 2200 Graduate Diamonds

2017  
May 25-Jul 21

### BANGKOK [GIAthai.net](#)

#### GEMOLOGY GEM 2500 Graduate Gemologist

2017  
Jun 8-Dec 22

#### GEM 2200 Graduate Diamonds

2016  
Oct 27-Dec 23

2017  
Feb 9-Apr 7  
Jun 8-Aug 4\*

#### GEM 2300 Graduate Colored Stones

2017  
Jan 12-Jun 9\*

#### JEWELRY MANUFACTURING ARTS JMA 370 Jewelry Design

2017  
Feb 2-Apr 7  
Jun 29-Sep 1

#### PROFESSIONAL DEVELOPMENT Applied Jewelry Professional™ (Intensive)

2017  
Jan 23-27  
May 29-Jun 2  
Sep 18-22

### CHENNAI [GIAindia.in](#)

#### GEMOLOGY GEM 2200 Graduate Diamonds

2017  
Apr 6-Jun 2

### DELHI [GIAindia.in](#)

#### GEMOLOGY GEM 2500 Graduate Gemologist

2017  
May 11-Dec 1

#### GEM 2200 Graduate Diamonds

2017  
Jan 19-Mar 17

### DUBAI [GIAmideast.com](#)

Classes will be held at Gold Tower, JLT Premises, unless otherwise mentioned.

#### GEMOLOGY GEM 2200 Graduate Diamonds

2017  
Jan 12-Mar 9  
Mar 30-May 25

#### Applied Jewelry Professional™ (Intensive)

2017  
Jan 22-26  
Mar 5-9  
Apr 30-May 4

### HONG KONG [GIAhongkong.com](#)

#### GEMOLOGY GEM 2500 Graduate Gemologist

2017  
Jan 5-Aug 25

#### GEM 2200 Graduate Diamonds

2016  
Oct 27-Dec 23

2017  
Jan 3-Mar 20 (Cantonese) (M, Tu, Th) (H)  
Feb 17-Jun 16 (Cantonese) (M, F) (H)  
Mar 7-May 18 (Cantonese) (M, Tu, Th) (H)  
Apr 18-Jun 29 (Cantonese) (M, Tu, Th) (H)

#### GEM 2300 Graduate Colored Stones

2017  
Jan 3-Jul 3 (Cantonese) (M, Tu, Th) (H)  
Jan 5-Jun 23  
Mar 14-Nov 28 (Cantonese) (Tu, Th) (H)  
Mar 23-Aug 25\*  
Jul 4-Dec 14 (Cantonese) (M, Tu, Th) (H)  
Oct 6, 2017-Mar 9, 2018\*

#### JEWELRY MANUFACTURING ARTS JMA 370 Jewelry Design

2016  
Oct 17-Dec 16

2017  
Mar 13-May 26

### HYDERABAD [GIAindia.in](#)

#### GEMOLOGY GEM 2200 Graduate Diamonds

2016  
Nov 3-Dec 30

2017  
Aug 3-Jul 21

### LONDON [London.GIA.edu](#)

#### GEMOLOGY GEM 2500 Graduate Gemologist

2017  
Jan 12-Jul 28  
Feb 23-Sep 8

#### GEM 2200 Graduate Diamonds

2016  
Oct 27-Dec 23

2017  
Jan 12-Mar 10\*  
Feb 23-Apr 21\*  
May 4-Jun 30

#### GEM 2300 Graduate Colored Stones

2016  
Oct 27, 2016-Mar 31, 2017

2017  
Mar 9-Jul 28\*  
Apr 20-Sep 8\*

#### JEWELRY MANUFACTURING ARTS JMA 370 Jewelry Design

2017  
Mar 9-May 12

#### JMA 400 Comprehensive CAD/CAM for Jewelry

2017  
Jan 5-Feb 24  
Jun 1-Jul 21

#### PROFESSIONAL DEVELOPMENT Applied Jewelry Professional™ (Intensive)

2016  
Oct 17-21  
Nov 7-11

2017  
Jul 17-21  
Aug 7-11

(N) = Nighttime; (S) = Saturday; (H) = Course includes both on-campus and self-paced study

\* Dates offered on a standby basis. Call for availability. You will be placed on a waiting list until 30 days prior to the start of your program or class when GIA can confirm your space availability. Schedules are subject to change without notice. For a current schedule, visit [GIA.edu/schedules](#). Contact GIA Admissions in Carlsbad or New York to confirm availability and for additional information and details.

### CLASS DURATION

Please note class schedules may vary depending on holidays and breaks; please review the schedule carefully and plan accordingly.

# 2016 and 2017 International Class Schedules (cont.)

## ON-CAMPUS PROGRAMS (cont.)

### MUMBAI [GIAindia.in](http://GIAindia.in)

#### GEMOLOGY

##### GEM 2500 Graduate Gemologist

2017  
Feb 2-Aug 18  
Mar 16-Sep 29  
Jun 22, 2017-Jan 12, 2018

##### GEM 2200 Graduate Diamonds

2016  
Dec 8, 2016-Feb 3, 2017  
Dec 22 2016-Feb 17, 2017

2017  
Jan 5-Mar 3  
Feb 2-Mar 31  
Feb 23-Apr 21  
Mar 16-May 12  
Apr 6-Jun 2  
Apr 27-Jun 23  
May 11-Jul 7  
Jun 22-Aug 18

##### GEM 2300 Graduate Colored Stones

2017  
Mar 30-Aug 18  
May 11-Sep 29

#### JEWELRY MANUFACTURING ARTS JMA 370 Jewelry Design

2016  
Dec 1, 2016-Feb 3, 2017

2017  
Feb 16-Apr 21  
May 4-Jul 7

### RAMAT GAN

For a current schedule of lab classes email [crrisrael@gia.edu](mailto:crrisrael@gia.edu) or call +972 3522 6749

### SHANGHAI [GIAtaiwan.com.tw](http://GIAtaiwan.com.tw)

#### GEMOLOGY

##### GEM 2500 Graduate Gemologist

2017  
Feb 10-Aug 25 (Chinese)

##### GEM 2200 Graduate Diamonds

2016  
Nov 11, 2016-Jan 5, 2017 (Chinese)

2017  
Feb 10-Apr 7 (Chinese)\*  
Mar 11-May 20 (Chinese) (S)  
May 12-Jul 7 (Chinese)

##### GEM 2300 Graduate Colored Stones

2017  
Apr 7-Aug 25 (Chinese)\*  
Jun 10-Dec 30 (S) (H)  
Sep 15, 2017-Feb 09, 2018\* (Chinese)

#### JEWELRY MANUFACTURING ARTS JMA 370 Jewelry Design

2017  
Mar 6-May 5 (Chinese)

### SURAT [GIAindia.in](http://GIAindia.in)

#### GEMOLOGY

##### GEM 2200 Graduate Diamonds

2016  
Nov 24, 2016-Jan 20, 2017

### TAIWAN [GIAtaiwan.com.tw](http://GIAtaiwan.com.tw)

#### GEMOLOGY

##### GEM 2500 Graduate Gemologist

2016  
Nov 4, 2016-May 19, 2017

##### GEM 2200 Graduate Diamonds

2017  
Nov 4, 2016-Jun 2, 2017 (Chinese)  
March 24-Oct 6 (Chinese)

##### GEM 2200 Graduate Diamonds

2017  
Mar 6-May 5 (Chinese) (M, W, F) (H)  
Mar 24-May 19 (Chinese)\*  
May 27-Jul 29 (Chinese) (S) (H)

##### GEM 2300 Graduate Colored Stones

2017  
Dec 30, 2016-Jun 2, 2017 (Chinese)\*  
May 19-Oct 6 (Chinese)\*

#### JEWELRY MANUFACTURING ARTS JMA 370 Jewelry Design

2016  
Nov 14, 2016-Jan 13, 2017

2017  
Jun 5-Aug 4 (Chinese)

#### PROFESSIONAL DEVELOPMENT

##### Applied Jewelry Professional (Intensive)

2016  
Oct 13, 2016-May 12, 2017

2017  
Mar 6-17 (Chinese)



Courtesy:  
Pioneer Gems,  
New York

### CLASS DURATION

Please note class schedules may vary depending on holidays and breaks; please review the schedule carefully and plan accordingly.

(N) = Nighttime; (S) = Saturday; (H) = Course includes both on-campus and self-paced study  
\* Dates offered on a standby basis. Call for availability. You will be placed on a waiting list until 30 days prior to the start of your program or class when GIA can confirm your space availability. Schedules are subject to change without notice. For a current schedule, visit [GIA.edu/schedules](http://GIA.edu/schedules). Contact GIA Admissions in Carlsbad or New York to confirm availability and for additional information and details.

# Student Life at GIA in Carlsbad

## It's a lot more than classrooms and coursework

We want your time here to be enriching and enjoyable. So we organize events and activities throughout the year: social activities, museum trips, guest lectures, networking events, the annual GIA Jewelry Career Fair and more. The Student Body Council also organizes events where you'll meet your classmates, visit local attractions and experience Southern California.



### Stewart Lithia Mine Tour

Get ready to head to the Stewart Lithia Mine in Pala, California. The mine is still a producer of top-quality tourmaline, quartz and spodumene, so seeing it is a special experience.

### Guest Speaker Lecture Series

Industry experts regularly come to GIA to speak about their experiences and the state of the industry. It's a great opportunity to network and meet notable men and women in the industry.

### SummerFest, Halloween and Holiday Tree Decorating

There's a fun activity for every season. Music, on-campus volleyball tournaments, local foods, pumpkin carving, holiday decorating and Halloween costume contests are great ways to unwind after class.

### Lunch & Learn (Third Tuesday of every month)

Hone your interviewing skills. Learn networking tips. Polish your resume. Once a month, Career Services provides helpful information that prepares you for a successful career after graduation.

Photos from left to right: Students enjoying Summer Fest; "What Happens After Graduation?" student lecture series; students at the Stewart Lithia Mine; Vincent Pardieu lecture "Afghanistan: Gems from the Silk Roads"; Timothy Adams lecture "All That Glitters – The World of Fabergé"; Halloween costume contest and holiday tree decorating.

25<sup>TH</sup>  
ANNIVERSARY

GIA® Jewelry  
Career Fair

Since its modest beginnings in 1991, GIA Jewelry Career Fair has become one of the most important venues for top companies to find top talent. Hosted in Carlsbad and New York every year, they are extraordinary opportunities for GIA graduates and students to meet recruiters from iconic international brands to innovative start-ups in the gem and jewelry industry.

**GIA Jewelry Career Fair comes to New York every July and to the Carlsbad campus every October.**



# ON-CAMPUS GEMOLOGY

The fascinating world of gemology is waiting for you at a GIA campus. Come study in our classrooms, and you'll learn from industry veterans. Study with classmates from around the world who share your passion for gemology. When you graduate, you'll have a diploma that is respected worldwide – and a professional network that brings a lifetime of dividends.

For schedules at GIA campuses worldwide see pages 20-22 or visit [GIA.edu/schedules](http://GIA.edu/schedules)

## Graduate Gemologist Program

The GIA Graduate Gemologist diploma program delivers a comprehensive gemology education on diamonds and colored stones. Using the latest gemological equipment, you will work with natural diamonds and gems under the trained eyes of GIA instructors. Through extensive lab work, you will practice identifying and grading diamonds and colored stones in an efficient, accurate and consistent manner. Skills taught include evaluating a diamond's proportions; distinguishing natural, treated, and synthetic gems; and using the GIA Colored Stone Grading System to determine gemstone quality. When studying on campus, you will keep tweezers, a 10x loupe, a pointer probe, plotting pens, a gem cloth, a table gauge, a crown angle card, a color grading card, a polariscope, a dichroscope, a handheld spectroscope, a refractometer with polarizing filter and removable magnifying eyepiece, refractive index (RI) liquid, a lab manual and printed course materials.

**What You Earn:** Graduate Gemologist Diploma, Graduate Diamonds Diploma, Graduate Colored Stones Diploma  
**Tuition:** \$21,000  
**Books & Materials:** \$1,670  
**Total Charges:** \$22,670 + applicable sales tax  
**Course Dates:** See schedule on pages 20-22

## Graduate Diamonds Program

The Graduate Diamonds diploma program examines the technical expertise needed to grade, buy and sell diamonds with the insight of a seasoned professional. This diploma program explores the GIA diamond grading procedures to assess the 4Cs – color, clarity, cut and carat weight – and how they affect diamond value. Students use professional diamond grading equipment for the purposes of examining a diamond's quality characteristics to grade and identify diamonds. Coursework also includes creating plotting diagrams; determining fluorescence; and detecting treated diamonds, synthetic diamonds and diamond simulants. Other topics covered include the effect of fluorescence on diamond body color; the role cut plays in the marketplace, and important sectors of the diamond industry, including dealers, cutters and manufacturers. When studying on campus, you will keep tweezers, a 10x loupe, a pointer probe, plotting pens, a gem cloth, a table gauge, a crown angle card, a color grading card, a lab manual and printed course materials.

**What You Earn:** Graduate Diamonds Diploma  
**Tuition:** \$6,600  
**Books & Materials:** \$320  
**Total Charges:** \$6,920 + applicable sales tax  
**Course Dates:** See schedule on pages 20-22

## Graduate Colored Stones Program

The Graduate Colored Stones diploma program explores the identification of common and unusual gemstones found in the marketplace. Subjects covered include the GIA Colored Stone Grading System and the correct usage of standard gemological equipment to distinguish natural, treated, and synthetic gemstones. The program also examines which gems are commercially important, shifting supply patterns, and how these factors affect gem prices and availability. This program also includes the study of 60 species of gemstones, and how illumination techniques can facilitate the identification process. When studying on campus, you will keep a polariscope, a dichroscope, a handheld spectroscope, a refractometer with polarizing filter and removable magnifying eyepiece, refractive index (RI) liquid, a lab manual and printed course materials.

**What You Earn:** Graduate Colored Stones Diploma  
**Tuition:** \$14,400  
**Books & Materials:** \$1,350  
**Total Charges:** \$15,750 + applicable sales tax  
**Course Dates:** See schedule on pages 20-22



"Greggory" is a life-size carving of a human skull, cranium and separate mandible. Smoky Quartz from Brazil. Courtesy: GIA Collection.

# ON-CAMPUS JEWELRY MANUFACTURING ARTS

Find your voice. Sharpen your skills. Ignite your creativity. Whatever your design and bench skill goals are, you'll find courses at GIA that empower you to reach them. What you learn will help you create a dazzling career.

For schedules at GIA campuses worldwide see pages 20-22 or visit [GIA.edu/schedules](http://GIA.edu/schedules)

## Graduate Jeweler Program

The Graduate Jeweler diploma program is a hands-on learning experience that prepares you for a career as a bench jeweler, and covers skills valuable for jewelry designers, CAD modelers and sales professionals. You will work with gems and precious metals, taking projects from castings to finished, set, and polished pieces. Progressive skill-building projects develop techniques like polishing, filing, texturing, sawing and general torch skills. Projects are made at your own workbench, which is equipped with a torch, a micromotor and an essential toolkit. You will keep hand tools; select pieces of jewelry you have crafted; and a mobile device that includes technical illustrations, instructional videos and bench reference guide.

**What You Earn:** Graduate Jeweler Diploma  
**Tuition:** \$21,400  
**Books & Materials:** \$1,650  
**Total Charges:** \$23,050 + applicable sales tax  
**Course Dates:** See schedule on page 20

## Comprehensive CAD/CAM for Jewelry Course

This comprehensive seven-week course covers the skills necessary to become a CAD/CAM (Computer-Aided Design/Computer-Aided Manufacturing) technician. Skills taught include using CAD software (Rhino 3D and Matrix) to develop models, and V-Ray software for photorealistic rendering. Topics covered also include subtractive and additive CAM machines, 3D printed models of selected designs, jewelry manufacturing techniques, GIA Quality Assurance Benchmarking, and jewelry engineering standards.

**What You Earn:** Comprehensive CAD/CAM for Jewelry Certificate  
**Tuition:** \$5,750  
**Books & Materials:** \$100  
**Total Charges:** \$5,850 + applicable sales tax  
**Course Dates:** See schedule on pages 20-22



Design by Tess Lecklitter  
GIA Jewelry Design & Technology Graduate

## Jewelry Design & Technology Program

The Jewelry Design & Technology diploma program covers topics essential to becoming a jewelry CAD designer and technology professional, including being able to create a piece of jewelry in CAD, understanding the challenges that come with its manufacturing, and knowing how to make it within budget. Instructors teach GIA's three-step process of inspiration, manipulation and communication to create attractive designs that are engineered for manufacturing. Other topics taught include important periods of jewelry history and their influence on contemporary design, jewelry manufacturing techniques, trade and safety practices, business fundamentals and decorative techniques. You will also be provided with a one-year student license for Matrix and Rhinoceros software, a 10x loupe and hand-measuring tools for you to keep.

**What You Earn:** Jewelry Design & Technology Diploma  
**Tuition:** \$19,900  
**Books & Materials:** \$570  
**Total Charges:** \$20,470 + applicable sales tax  
**Course Dates:** See schedule on page 20

## Jewelry Design Course

In this intensive nine-week course, instructors teach creative and technical skills needed to begin a career as a custom jewelry designer. Jewelry design theory helps students acquire a working knowledge of jewelry artistry. Skills covered include illustrating the shape, form and texture of metal; working with drafting tools; and rendering yellow and white metals, as well as a range of faceted and cabochon gemstones and pearls. Instructors show how to illustrate rings in five different views and how to keep design ideas flowing. At the completion of this course, you will have a hand-developed portfolio of your work and a digital copy to show prospective employers and clients. You will be able to keep your design toolkit, which contains a variety of paints, pencils, brushes, templates, papers and vellum, and other art tools.

**What You Earn:** Jewelry Design Certificate  
**Tuition:** \$6,000  
**Books & Materials:** \$350  
**Total Charges:** \$6,350 + applicable sales tax  
**Course Dates:** See schedule on pages 20-22

Note: Stated tuition and other fees are for 2016 courses and are subject to change. Please visit [GIA.edu](http://GIA.edu) for 2017 tuition and fees.



# Smartphone Hacks

BY ROBERT WELDON & DENISE CONRAD

## Sharp Photos with Smartphones

Your smartphone's high-resolution camera is a capable tool for taking beautiful photos of gems and jewelry. Many have 8+ megapixel resolution and optical sensors. When combined with the right accessories and techniques you may not need to purchase a professional-quality SLR camera.

We asked Robert Weldon and Denise Conrad, two outstanding photographers who work at GIA, to share tips for taking photos using iOS or Android-based smartphones and tablets.



## Before You Begin

**Use a tripod** to stabilize your mobile device. If one is not available, make sure your cell phone is on a stable surface when taking photos. Ensure your object is in focus.



**Use a wireless shutter release** to take the photo without touching the screen. Physically touching the screen could shake the device and result in a blurry picture. These devices connect through a Bluetooth connection.



Amazon and Photojojo.com are great resources for smartphone camera gadgets and lenses.

**Clean your jewelry:** The high-resolution camera on your mobile device will capture dust, marks and scratches. Fingerprints, which are often unseen by the naked eye, can also mar beautiful jewelry. A soft, clean jewelry cloth is ideal for getting your pieces ready for the camera. Handle the object with clean cotton gloves.



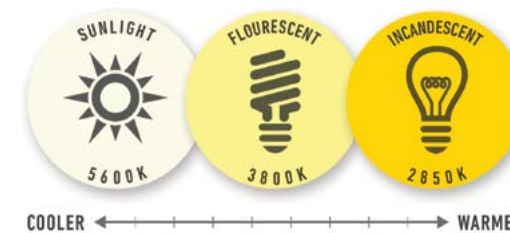
**Choose appropriate backgrounds** as it can affect the appearance of metals, diamonds and light-colored gemstones.

- When to use a black background: Light-toned pieces often look better on darker backgrounds because contrast adds drama. It also calls attention to jewelry.
- When to use a white background: Poorly cut gems can appear more attractive on light backgrounds. White backgrounds also bounce light back at the subject matter, which can minimize distracting shadows.
- A clean white piece of paper, plastic or tile used as a background can keep the picture uncluttered and help achieve a correct color balance.

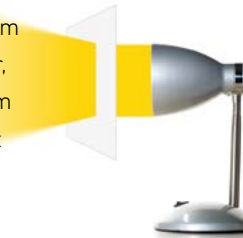
**Attachable macro lenses** can enable extreme close-up photography of small items and are available from a variety of manufacturers.

## Consider Your Lighting

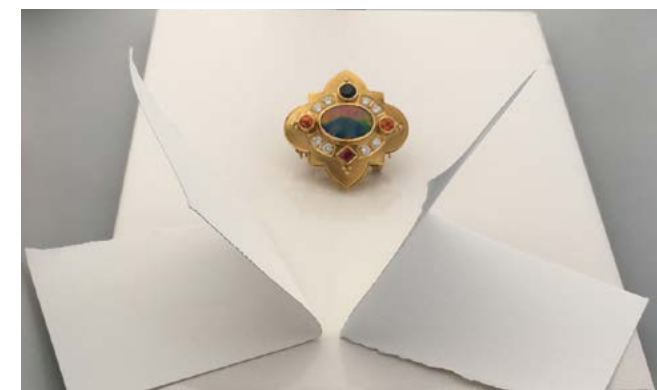
**Use a single color temperature of light:** Try to avoid environments that have mixed lighting – like fluorescent, incandescent and daylight. Find a spot that has one kind of lighting, and use it as your principal source.



**Use diffusion** to help spread the light: Diffused lighting scatters light, softens shadows and provides uniform lighting for the subject. Tracing paper, onionskin paper or translucent vellum are good choices to scatter light, cast soft shadows, and bring out the best color in a gemstone.



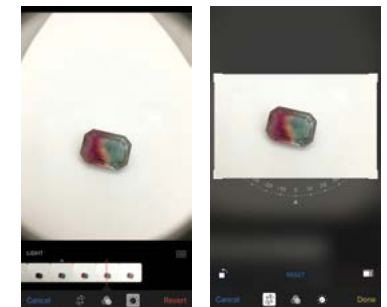
**Bounce light:** Add cards or reflectors to your stage to help bounce light towards your subject. Styrene is preferred but you can use an envelope or card stock.



Brooch designed and gifted by Paula Crevoshay  
Courtesy: GIA collection

## Process Your Image

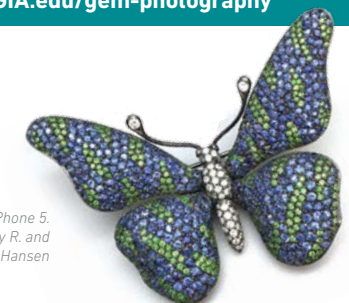
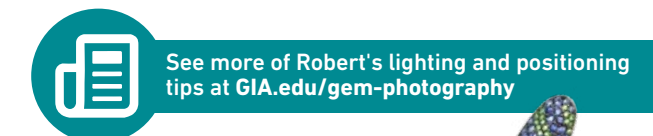
Do this step before you finish your photo shoot. Apps on your phone can crop, adjust color balance, and help a gemstone or piece of jewelry look the way it really appears. This will avoid colorcasts (unwanted tints in the image), and will help capture an accurate image of the object.



### Apps with advanced photo processing features:

- **Camera+:** Great for sharpening photos over the regular edit tool
- **Instafit:** Retro-fit photos with white borders for a more artsy look
- **PicTapGo:** For easy editing and color correction
- **645 Pro Mk III:** Provides a little more control over ISO, WB, filters, etc.
- **Retouch:** Deletes any distracting elements
- **iWatermark:** Watermarks all your images

Taking great pictures is like learning any skill: you'll get better the more you do it. So the next time you set up for a photo shoot, use our tips. The results will be worth it.



Photographed using an Apple iPhone 5.  
Gift of Dr. Gary R. and Barbara E. Hansen

The Robert Mouawad Campus  
5345 Armada Drive  
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# EDUCATION

Quarterly

## GIA PLATINUM QUALITY ASSURANCE BENCHMARKS

Learn best practices for designing, manufacturing and servicing platinum jewelry that will last for generations.

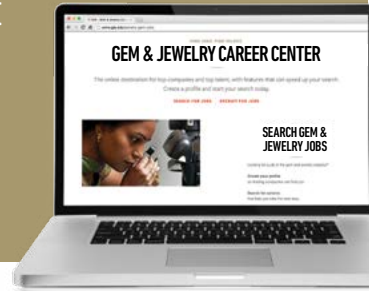
[GIA.edu/QAB](http://GIA.edu/QAB)



## GIA Gem & Jewelry Career Center

The Online Destination for Top Companies and Top Talent

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