ELAN TECHNOLOGY PROUDLY PRESENTS A
Glass Science and Technology Course
Spring 2026
Instructed by:
Dr. Eric C. Skaar, Ph.D and P.E.

Learn about glass to metal sealing through
Intimate lectures and hands-on demonstrations.
A comprehensive advanced materials curriculum delivered
In a practical format for real world applications.

Elan Technology, Inc. announces the Glass-to-Metal Sealing course, which has graduated over 1000 engineers to date worldwide.

Dates: **Tuesday April 7th – Friday April 10th, 2026**

Instructor: **Dr. Eric Skaar, Ph.D. and P.E.**

- Associate Professor (retired), Gilbert C. Robinson Department of Ceramic and Materials Engineering, Clemson University.
- Over 30 years of experience in the field of ceramic and materials engineering.
- Author of over 70 technical publications.
- Principal Investigator responsible for numerous government and corporate sponsored research projects.

Cost: $850 per student (prepaid non-refundable: covers instruction, text, on-site luncheon, and dinner on 1st and 3rd evenings.) Registration is considered accepted once a credit card payment is received.

Location: Elan Technology
169 Elan Court
Midway Georgia 31320
Car rental strongly recommended

Airport: Savannah/Hilton Head International Airport (SAV)

Hotel: Per attendee's preference –suggestions below

- 15 mins to plant SpringHill Suites Richmond Hill
- 35 mins to plant Fairfield Downtown Savannah

To Enroll: Please contact:
Lacey M. Weimer 912.880.3072, lacey@elantechnology.com

Course Schedule and Lecture Topics

Tuesday – Sombremesa

5:30 – 7:00 PM
Introduction of Elan staff and attendees: Meet at Sombremesa, https://www.sobremesasav.com/, 2312 Abercorn St, Savannah 31401 for cocktails and heavy hors d'oeuvres. Casual Attire.

Wednesday– at Elan Technology

9:00 – 9:45 AM
Introduction to Materials, and the Glassy State.
Lecture 1 – Introduction to Materials
Lecture 2 – The Glassy State
9:45 – 10:30 AM
Fundamentals
Lecture 3 – Glass Melting and Homogenization
Lecture 4 – Viscosity
10:30 – 10:45 AM
Break
10:45 – 11:30 PM
Fundamentals (Cont'd.)
Lecture 5 – Thermal Properties
12:00 – 1:00 PM
Lunch – on premises

1:00 – 2:45 PM
Glass to Metal Seals
Lecture 6 – Glass to Metal Seals
Lecture 7 – Glass to Metal Seals – Design Parameters
2:45 – 3:00 PM
Break
3:00 – 3:30 PM
Glass to Metal Seals (Cont'd.)
Lecture 8 – Recommended Glass – Metal Combinations
3:30 – 5:00 PM
Stress
Lecture 9 – Stress in Glass to Metal Seals
Lecture 10 – Stress in Glass

Thursday– at Elan Technology

9:00 – 9:45 AM
Considerations in Manufacturing

Lecture 11 – More Glass to Metal Seals
Lecture 12 – Furnace Conditions
Lecture 13 – Relevance of Water to Sealing

9:45 AM – 10:00 AM
Break

10:00 AM – 11:30 AM
Glass Properties
Lecture 14 – Some Other Important Glass Properties
Glass Ceramics and Other Specialty Glasses
Lecture 15 – Sealing with a Glass Ceramic
Lecture 16 – Special Sealing Glasses
Glass Processing Techniques
Lecture 17 – Spray Drying

11:30 – 1:30 PM
Elan Plant Tour
Lunch – on premises

1:30 – 3:00 PM
Glass Processing Techniques
Glass Melting

3:00 – 4:30 PM
Interactive session for design, production and troubleshooting with Dr. Eric Skaar and the Elan engineering staff.
Course Evaluations
Diplomas

5:00 – 7:30 PM
Outdoor Dining at Fish Tales, https://www.fishtalesrh.com/, 3203 Fort McAllister Rd, Richmond Hill GA 31324

Friday– at Elan Technology (by appointment)

This short course is designed for persons with either a technical or non-technical background that are working in the field of glass to metal seals. In addition to learning about the manufacture, properties and use of sealing glasses through lectures and an extensive set of handouts---which each person receives at the beginning of the course---you will observe several laboratory demonstrations important to sealing glasses and tour the extensive manufacturing facilities at Elan Technology where you will observe the manufacturing of powder preforms.

A valuable part of this course is the informal exchange of information that is encouraged and promoted among the class participants and which occurs during the breaks and other times. Previous classes have indicated this exchange of information has been one of the best parts of class so we hope you will find this useful also. You are asked to bring 2 or 3 examples of the glass to metal seals which the class can observe. Furthermore, you are asked to bring along something that you can share with the class---how you solved a problem, useful "tricks" you have learned from experience, testing techniques----anything which you could share with your classmates that you feel they would find interesting.

If you have a specific topic or problem you would like discussed, time is set aside toward the end of the class for that purpose. It is helpful if you would contact Dr. Skaar at ecskaar1@gmail.com or Andrew Kanjanapant, Elan Technology's VP-Operations at andrew@elantechnology.com so that we have some advance notice of your topic or problem.