

**MASTER OF ECONOMIC GEOLOGY UNIT**  
*via online delivery*

# Geometallurgy

**Week 1: 27 October – 1 November, 2025**

**Week 2: 24 – 28 November, 2025**

Online content will be delivered via Zoom between 9am and 5:30pm AEDT (UTC+11)

A comprehensive overview of practical geometallurgy: From mineral processing fundamentals to deposit characterisation.



CODES, Centre for Ore Deposit and Earth Sciences, University of Tasmania

CRICOS Provider Code 00586B

**Geometallurgy is an interdisciplinary field that links geology with metallurgy in order to optimize how mineral resources are extracted and processed.** Ore body knowledge, though robust geological characterisation, is fundamental to predictive geometallurgy.

With increasing ore body complexity, mitigating technical risk is of paramount importance. Key outcomes from geometallurgy programs are to boost operational resilience, improve recovery and throughput, support sustainability goals and enhance economic optimisation.

This unit introduces geometallurgy and how to establish a geometallurgy work program, with a focus on developing a foundation knowledge of metallurgy for geologists and ore characterisation techniques. You will also learn about the application of data analytics in predictive geometallurgy, fundamentals of environmental geology, and current trends in environmental and social governance. We will explore current research and future directions through panel discussions and industry case studies.

## INVITED PRESENTERS

**Toni Kojovic** is a highly accomplished and recognized leader in the field of mining and mineral processing. Toni is the managing director of SimSAGE and a comminution consultant with more than 30 years of experience, both as a Senior Researcher with the JKMRC and as Manager of Technical and Applied Research at Teck Cominco's Red Dog Mine in Alaska.

**Bill Staunton** is a former Manager of the Gold Technology Group and Amira P420 Gold Processing Technology Project at the WA School of Mines, Curtin University. He is and now consultant with AdvanceMet. Bill has been working in gold for more than 35 years, covering research plant surveys and optimisation, process modelling and training/professional development.

**Laurence Dyer** is a senior lecturer and Discipline Lead - Metallurgical Engineering at Curtin University. His research interests lie in leaching, adsorption and precipitation and he has worked extensively in precious metal, rare earth, nickel and copper extraction as well as iron chemistry. Laurence is currently investigating precious metal tellurides and identifying alternative treatment methods for rare earth minerals.

**Scott Halley** is a highly regarded consultant specialising in applied lithogeochemistry for geochemical exploration and mineral mapping. Scott has consulted to over 100 mining and exploration companies. He is an expert in the application of SWIR and whole-rock geochemical data to understand deposit mineralogy.

### CODES Presenters:

Angela Escolme—Geometallurgy  
Julie Hunt—Geometallurgy  
Matthew Cracknell—Data analytics  
Mohammad Fathi—Flotation recovery  
Owen Missen—Environmental Geology  
Jeff Oalman – LA-ICP-MS  
Sebastien Meffre—LA-ICP-MS  
Michael Roach—Geophysical tools  
Elena Lounejeva —XRD  
Lejun Zhang—SWIR

### UTAS Central Science Laboratory:

Thomas Rodemann  
—Vibrational Micro Spectroscopy  
Sandrin Feig— SEM/EMPA

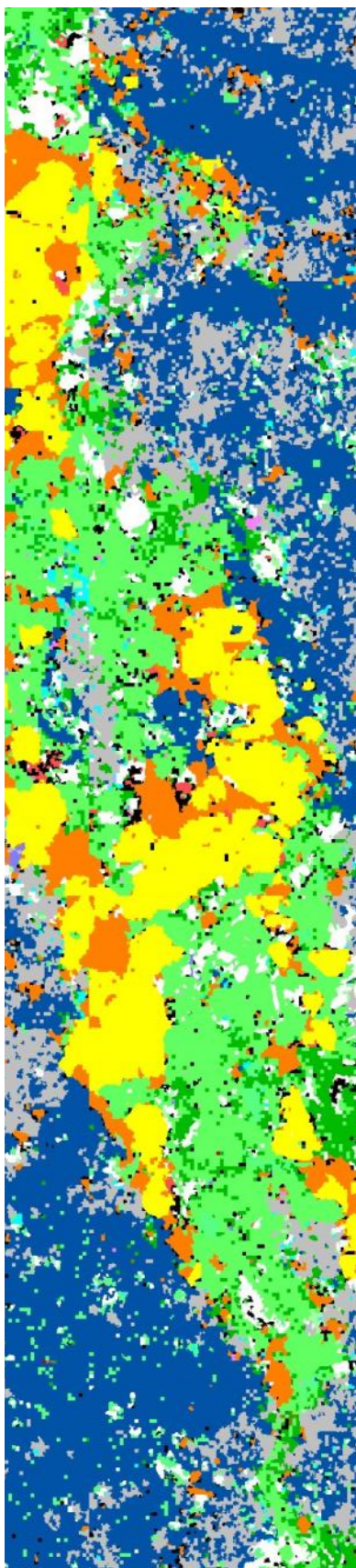
**Industry case studies** will be presented to provide examples of best practice approaches to the industry application of geometallurgical studies:

**Wendy Ware - Datarock**

**Andrea Rutley - UBC**

**Aaron Baensch - ATB Geoscience**

**More to be confirmed...**



## **Geometallurgy**

*is offered as a unit of the national Minerals Geoscience Masters program.*

### **MASTER OF ECONOMIC GEOLOGY**

#### **THE MOST COMPREHENSIVE MASTERS DEGREE IN MINERAL EXPLORATION AND MINING GEOLOGY ANYWHERE IN THE WORLD**

This course work-based Masters program is aimed at geoscientists who want to gain a thorough up-date on advances across the spectrum of economic geology applied to mineral exploration. The Master of Economic Geology at UTAS is part of the national Minerals Geoscience Masters program, jointly offered by the University of Tasmania and the University of Western Australia, in conjunction with Curtin Business School at Curtin University.

#### **Course structure**

The Masters course can be completed in either of two ways:

*Option 1 (research pathway):* requires the completion of six coursework units (worth 75% of total credit points) and a minor research thesis (worth 25%). Five of the units must be completed at CODES including thesis units KEA724 and KEA725, core units KEA712, KEA716 and at least one field-based unit, while the remainder may be completed at other participating universities. Duration: 18–24 months full-time; up to 60 months part-time (flexible in recognition of industry participants).

*Option 2 (professional pathway):* requires the completion of eight units of coursework, at least five of which must be undertaken at CODES including core units KEA712, KEA716 and at least one field-based unit. Duration: up to 60 months part-time (flexible in recognition of constraints on industry participants).

Participating universities offer up to seven units annually or in rotation over a two-year period. Most units are of two weeks duration.

#### **Fees**

UTAS tuition fees are approximately \$2,328 per unit (8 in total) for domestic students (2025 rate for Commonwealth Supported Places) and \$10,063 (AUD) per unit for full-fee paying overseas students (FFPOS) (2025 rate). Field-based courses have additional costs. Costs will vary for units taught by other MGM partner institutions.

#### **Entry Requirements**

BSc (Hons), or a BSc (majoring in geoscience) with at least two years industry experience, or a Graduate Certificate in Economic Geology. International students should be aware that English language proficiency requirements also apply.

#### **Masters units offered by CODES**

- 2 – 7 June & 7 – 11 July 2025:  
KEA709 Ore Deposit Geochemistry, Hydrology and Geochronology #
- 4 August – 31 October 2025 (Intensive Part 2: 15 – 19 September):  
KEA713 Geodata Analytics \*
- 11 – 25 October 2025:  
KEA707 Ores in Magmatic Arcs (South America) ^
- 27 October – 1 November & 24 – 28 November 2025:  
KEA711 Geometallurgy \*
- February 2026:  
KEA718 Advanced Field Skills in Economic Geology ^
- March 2026:  
KEA708 Volcanology and Mineralisation in Volcanic Terrains (New Zealand, western Tasmania) ^
- April – May 2026:  
KEA716 Fundamentals of Economic Geology \*
- June – July 2026:  
KEA712 Ore Deposit Models and Exploration Strategies #
- October – November 2026:  
KEA710 Exploration in Brownfield Terrains \*
- March 2027:  
KEA707 Ores in Magmatic Arcs (Indonesia) ^

\* **online delivery**

# **blended delivery (face to face and online)**

^ **face to face delivery**

#### **For further information contact:**

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[Robert.Scott@utas.edu.au](mailto:Robert.Scott@utas.edu.au)  
Website: [utas.edu.au/codes/masters-short-courses](https://utas.edu.au/codes/masters-short-courses)

# PRELIMINARY PROGRAM

## WEEK 1: October 27—1 November

### Monday 27<sup>th</sup> October

Introduction to geometallurgy — Angela Escolme

Sample selection and preparation — Angela Escolme, Julie Hunt

Characterisation tools and techniques 1 — Jeff Oalman, Sandrin Feig, Thomas Rodemann

LA-ICPMS for Au — Sebastien Meffre

### Tuesday 28<sup>th</sup> October

Comminution — Toni Kojovic (SimSAGE)

Environmental and Social Governance — TBA

### Wednesday 29<sup>th</sup> October

Statistics — Toni Kojovic (SimSAGE)

Gold processing — Bill Staunton (AdvanceMet)

### Thursday 30<sup>th</sup> October

Flotation recovery — Mohammad Fathi

Project introduction — UTAS staff

### Friday 31<sup>st</sup> October

Characterisation tools and techniques 2 — Lejun Zhang, Michael Roach, Elena Lounejeva

Automated core logging technologies — Aaron Baensch (ATB Geoscience)

Hydrometallurgy and pyrometallurgy — Laurence Dyer (Curtin)

### Saturday 1<sup>st</sup> November

Circuit Design and Virtual Field Trip — Michael Roach

Virtual lab tours — various CODES, CAL and CLS presenters

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## WEEK 2: 24—28 November

### Monday 24<sup>th</sup> November

Data Analytics and image analysis — Matthew Cracknell

Geometallurgy program design — Angela Escolme

Modelling geometallurgical data — TBA

### Tuesday 25<sup>th</sup> November

Environmental Geology — Owen Missen

Project Tutorial

### Wednesday 26<sup>th</sup> November

*Industry Panel Discussion: The value-case for geometallurgy*—Andrea Rutley (UBC), Wendy Ware (Datarock)

Advances in mineralogy — Angela Escolme, Scott Halley (Mineral Mapping), Lejun Zhang

### Thursday 27<sup>th</sup> November

Research case studies —TBC

### Friday 28<sup>th</sup> November

Geometallurgy looking forward — Angela Escolme

Student presentations



# REGISTRATION FORM

## Geometallurgy

Week 1: 27 October—1 November, 2025

Week 2: 24—28 November, 2025

Please complete and return to:

CODES

University of Tasmania, PO Box 807  
Sandy Bay, Tasmania, Australia 7006

Ph: +61 3 6226 2472

Email: [CODES.Info@utas.edu.au](mailto:CODES.Info@utas.edu.au)

### PERSONAL DETAILS

Title—Please highlight ( Prof / Dr / Mr / Mrs / Ms / Miss )

First Name: ..... Last Name: (surname / family name): .....

Preferred Name: .....

Position: .....

Company / University / Affiliation: .....

Address: .....

City: ..... State: ..... Postcode: ..... Country: .....

Email: ..... Phone (mobile / cell): .....

Dial-in Location (ie City) ..... Dial-in Timezone (e.g. UTC +10) .....

### REGISTRATION FEES

All fees are in Australia dollars (AUD) and include GST.

Please indicate ☒

#### Minerals Geoscience Masters Program (MGM) Students:

- ☐ Full unit (free) - University of Tasmania enrolled  
☐ Full unit (free) - University of Western Australia enrolled

#### Industry Participants:

- ☐ Full course (\$3,600)  
☐ \_\_\_ days at \$600/day (maximum charge 6 days, indicate days below)

#### CODES Staff/Students:

- ☐ Unit classes (free, indicate days below)

#### Other Full-time Students (proof of current student status required):

- ☐ A limited number of discounted places may be available for full-time students from other institutions. Please contact [CODES.Info@utas.edu.au](mailto:CODES.Info@utas.edu.au) to inquire about availability, together with proof of current full-time enrolment at your home institution.

PLEASE NOTE: Participants *NOT* attending entire course, please circle selected days

Week 1:     27    28    29    30    31     1    October—November

Week 2:     24    25    26    27    28            November

### PAYMENT

Registrations are due by 10th October, 2025. Full payment must be received by 19th October, 2025.

Preferred payment method. Please indicate ☒

#### ☐ Credit Card

Upon receipt of your registration form and confirmation of your place, you will be provided with a payment reference number and web address for online payments. Please note: Credit card details *cannot* be accepted by email.

#### ☐ Invoice (payment can be made by credit card or bank transfer)

Invoice to (name/company): .....

Attention to (optional): .....

Reference (e.g. order number (optional)): .....

Address: .....

.....

.....

Email address: .....

**Please retain a copy of this form for your records and email to [CODES.Info@utas.edu.au](mailto:CODES.Info@utas.edu.au)**

**MGM STUDENTS: THIS FORM DOES NOT CONSTITUTE AN OFFICIAL UNIVERSITY ENROLMENT—YOU MUST ALSO ENROL VIA ESTUDENT AND ENSURE TUITION FEES ARE PAID BY THE PAYMENT DEADLINE.**