# **Advanced Field Skills in Economic** Geology

13–26 February 2022

CENTRE FOR ORE DEPOSIT AND EARTH SCIENCES

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

# MASTER OF ECONOMIC GEOLOGY SHORT COURSE









# Advanced Field Skills in Economic Geology

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

# MASTER OF ECONOMIC GEOLOGY

# THE MOST COMPREHENSIVE MASTER 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:* requires the completion of six coursework units and a minor research thesis. Four of the units must be completed at CODES, while the remainder may be completed at other participating universities. Duration: 18–24 months full-time; up to 30 months part-time (flexible in recognition of industry participants).

*Option 2:* requires the completion of eight units of coursework, at least four of which must be undertaken at CODES. Duration: up to 30 months part-time (flexible in recognition of industry participants).

#### Units offered by CODES

- KEA718 Advanced Field Skills in Economic Geology: 13–26 February 2022
- KEA716 Fundamentals of Economic Geology: 4–9 April & 2–6 May 2022
- KEA712 Ore Deposit Models and Exploration Strategies: June–July 2022
- KEA710 Exploration in Brownfield Terrains:
  - October 2022
- KEA713 Geodata Analytics: August–October 2022 (19–24 September- intensive Part 2)
- KEA708 Volcanology and Mineralisation in Volcanic Terrains (New Zealand, western Tasmania):

November 2022

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

#### Fees

UTAS tuition fees are approximately \$2,005 per unit (8 in total) for domestic students (2022 rate) and \$8,636 (AUD) per unit for full-fee paying overseas students (FFPOS) (2022 rate). Field-based courses have additional costs. Costs will vary for units taught by other MGM partner institutions.

#### **Entry Requirements**

A BSc (Hons), or a BSc (majoring in geoscience) with at least two years industry experience. International students should also refer to http://www.international.utas.edu.au. English language proficiency requirements also apply.

- KEA718 Advanced Field Skills in Economic Geology: February 2023
- KEA707 Ores in Magmatic Arcs: March 2023
- KEA709 Ore Deposit Geochemistry, Hydrology and Geochronology:
  - June-July 2023
- KEA713 Geodata Analytics: August–October 2023
- KEA711 Geometallurgy: October 2023

#### For further information contact:

Dr Robert Scott Masters Coordinator, CODES Private Bag 79, Hobart 7001, Australia Tel: +61 3 6226 2786 Email: Robert.Scott@utas.edu.au CODES.Info@utas.edu.au Website: http://www.utas.edu.au/codes/masters-short-courses

#### COURSE PRESENTERS

Robert Scott is the Coordinator of the Master of Economic Geology program at CODES, and lecturer in Structural Geology in the Discipline of Earth Sciences at the University of Tasmania. He has extensive field mapping skills, and has been training geoscientists in field mapping for three decades.

the TMVC Research Hub, UTAS specialising in the application of alteration mineral chemistry for enhancing exploration in green rock and lithocap environments, and vectoring using SWIR and whole-rock geochemical data.

Lejun Zhang is a Senior Research in Michael Baker is a Senior Research Fellow in Economic Geology in the TMVC Research Hub, UTAS. He has extensive research expertise in mineral chemistry and its applications to exploration for porphyry and epithermal deposits.







## COURSE INFORMATION AND PRELIMINARY PROGRAM

This field-based short course will be held in Tasmania over two weeks in February 2022. The course will teach fundamental and advanced mapping and field skills suitable for use in the minerals industry, including field-based rock and mineral identification, fact and form surface mapping, Anaconda-style mapping, structural measurement and graphic logging techniques for drill core, and the use of spectral, geochemical and remote sensing data sets in making and interpreting geological maps. This course has been identified as critical by the Minerals industry to teach skills lacking for many graduates.

#### Part One:

For the first part of the course, detailed structural and volcanic facies mapping will be conducted in polydeformed Cambrian submarine volcanic rocks near the Henty gold mine. The mapping area is ~15 km south, along strike from the world-class Rosebery Zn-Cu-Pb-Au-Ag volcanic-hosted massive sulfide deposit in the Cambrian Mount Read Volcanic belt, western Tasmania.

Techniques covered include graphic and structural core logging, volcanic facies mapping and interpretation and structural mapping and analysis of simply deformed regions.

### Part Two:

The second week of the short course involves a two-day Anaconda mapping and core logging exercise on the Mount Lyell mining lease (Western Tharsis Cu-Au deposit); a threeday advanced structural mapping exercise in multiply deformed turbidites of the Mathinna Supergroup in NE Tasmania, and a one-day Anaconda mapping exercise on the Freycinet Peninsula examining features in Devonian granites formed at the magmatic-hydrothermal transition. In a post-fieldtrip assignment, students will complete an analysis of structural data collected during the second week of the fieldtrip.

Registration fees cover the cost of field trip transport and accommodation. Participants are responsible for air travel to/from Hobart and accommodation in Hobart.

All participants must carry their own PPE (steel-capped boots, long-sleeved shirts, long sturdy trousers, 'wet boots' (for wading), geological hammer, hand lens, scratcher, field notebook, pens/pencils (incl coloured), ruler, protractor, eraser, compass/clinometer. You will also need sun protection, and wet weather gear.

\* All participants are required to be fully vaccinated against COVID-19, and will need to provide proof of vaccination. All participants are required to comply with all state government COVID-19 regulations, including testing, quarantining, mask wearing, self-isolating, etc.



<b>REGISTRATION FORM</b> Advanced Field Skills in Economic Geology 13–26 February 2022		Please complete and return to: CODES University of Tasmania, Private Bag 79 Hobart, Tasmania, Australia 7001 Ph: +61 3 6226 2472 Email: CODES.Info@utas.edu.au
PERSONAL DETAILS		
Title—Please highlight ( Prof / Dr / Mr / Mrs / Ms / Miss )		
First Name: Last N	ame: (surname / family	name):
Preferred Name:		
Position:		
Company / University:		
Address:		
City: State: Postco	ode: Co	ountry:
Email:	Phone (mobile / ce	II):
Dietary requirements / allergies / other health issues:		
Next of kin (name, relationship and email/phone contact):		
REGISTRATION FEES (estimated — TBC mid-January)	PAYMENT	
All fees are in Australian dollars (AUD) and include GST. Fees do not include flights to/from Hobart, or accommodation in Hobart.	Registrations are due by the 31st of January, 2022. Full payments are due by the 4th of February, 2022.	
Please indicate 🗹	Preferred payment method. Please indicate 🗹	
Minerals Geoscience Masters Program (MGM) Students: (Excludes UTAS tuition fee) Full course (\$1,600)- University of Tasmania enrolled Full course (\$1,600)- University of Western Australia enrolled	<ul> <li>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 <u>cannot</u> be accepted by email.     </li> <li>Cheque or Bank Draft         Please make cheques and bank drafts payable to "The University of Tasmania". Bank drafts must be made out in Australian currency (AUD).     </li> </ul>	
Industry Participants: □ Full course (\$3,000)* □ Part one– Western Tasmania (\$1,700)* □ Part two– Tasmania (\$1,700)*		
Other Students:	Invoice	

- □ Full course (\$1,600)\*
- □ Part one– Western Tasmania (\$1,000)\*
- □ Part two– Tasmania (\$1,000)\*

\* Participant numbers for this course are capped, with preference to enrolled MGM students. Other interested parties will be advised whether they have secured a place by February 1st.

Please retain a copy of this form for your records and email or post original to CODES.Info@utas.edu.au

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Name, address and email address for person responsible for payment of

invoice: .....

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