Filtered, paste and thickened tailings is developing into a mature technology with wide application in mine tailings management. Several large tonnage operations are being developed based on paste and filtered tailings systems.

The successful implementation of filtered, paste and thickened tailings technology is dependent on a sound understanding of slurry colloidal behavior, thickening and thickener operation, filtration, rheology, pump and pipeline transport systems, conveyor transport and disposal methodologies.

Course Introduction

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Objectives

The course objectives are:

- An introduction to the fundamental concepts related to dewatering, transportation and deposition of filtered, paste and thickened tailings.
- To demonstrate the application of these concepts to the design and implementation of appropriate cost effective tailings systems.

Continuing Education

The Colorado School of Mines will award 2.3 Continuing Education Units (CEU's) upon successful completion of this course.

Content & Program

The intensive four-day course consists of 14 lecture and laboratory demonstration sessions. Each participant is issued with a set of notes and reference materials.

Presenters

The course is presented by Prof. Andy Fourie of the University of Western Australia, and senior staff from Paterson & Cooke. Key presenters are:

- **Andy Fourie** ~ Management and disposal of mining waste, minefill, soil mechanics, tailings behavior, paste technology and environmental geomechanics.
- **Mike Cook** ~ Thickening and separation technology including equipment optimization and modernization, mechanical and process commissioning, site audits, upgrades and retrofits.
- **Christian Kujawa** ~ Metallurgical test work, process development, plant design, process control and optimization.
### Course Agenda

<table>
<thead>
<tr>
<th>Session</th>
<th>Tuesday June 04</th>
<th>Wednesday June 05</th>
<th>Thursday June 06</th>
<th>Friday June 07</th>
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<tbody>
<tr>
<td>07:45–08:00</td>
<td>Tea/Coffee</td>
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<tr>
<td>08:00–10:00</td>
<td>Registration (until 8:10)</td>
<td>Filtration Fundamentals, Technology and Testing Considerations</td>
<td>Geotechnical Properties of Tailings</td>
<td>Methods of Disposal</td>
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<td>10:00–10:30</td>
<td>Coffee break</td>
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<tr>
<td>10:30–12:00</td>
<td>Mineralogy and Water Chemistry</td>
<td>Transport Systems</td>
<td>Fundamentals of Tailings Geotechnics</td>
<td>Mine Backfill</td>
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<td>12:00–13:00</td>
<td>Lunch</td>
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<tr>
<td>13:00–14:30</td>
<td>Thickener Technology</td>
<td>Conveyor Transport and Stacking</td>
<td>Tailings Deposition Strategies</td>
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<td>14:30–15:00</td>
<td>Coffee break</td>
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<tr>
<td>15:00–17:00</td>
<td>Rheology</td>
<td>Laboratory Demonstrations</td>
<td>Free Afternoon</td>
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<tr>
<td>Evening</td>
<td>Social Function</td>
<td>Free evening</td>
<td>Case Studies (17:00 to 20:30; including dinner)</td>
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### Who Should Attend
- Geotechnical engineers
- Chemical and mineral processing engineers
- Mechanical engineers
- Operations engineers
- Consulting and design engineers

### Dates & Venue
The course will be held from Tuesday, June 4, through Friday, June 7, 2019 in the Center for Technology and Learning Media (CTLM) on the campus of the Colorado School of Mines in Golden, Colorado.

### Fees & Registration
The course registration fee is **$2,495** (US) if received by April 8, 2019. The fee is **$2,695** (US) after that date. Payment must accompany the application form. Enrollment applications will be accepted in the order received. To register on-line, use the following web address:

https://csmspace.com/register/541

The sponsor reserves the right to cancel the course and return registration fees if enrollment is insufficient. Personnel substitutions may be made at any time without penalty. Cancellations will be charged a **$275** service fee. No refunds will be made to participants who fail to substitute or cancel at least five working days prior to the start of the course.

### Contact
Registration Enquiries: Continuing and Professional Education Services, Colorado School of Mines, 1600 Jackson St., Suite 190, Golden, CO 80401. Tel: 303-384-2690; Fax 303-384-2695; Learn@mines.edu

Technical Enquiries: Matt Treinen, Matt.Treinen@PatersonCooke.com