

## Registration Form

Early registration is advised as entry to the Biotechnology: Proteins and Protein Purification short course is limited.

Please fill in the form below and post or fax to:

Mark Lay  
Department of Engineering  
University of Waikato  
Private Bag 3105  
Hamilton, New Zealand  
Email: [mclay@waikato.ac.nz](mailto:mclay@waikato.ac.nz)  
Ph: +64 7 838 4556  
Fax: +64 7 838 4835

Registration closes Monday, March 1st 2010.  
Payment due by Monday, March 15th 2010.

**Name:** \_\_\_\_\_

**Position:** \_\_\_\_\_

**Organisation:** \_\_\_\_\_

**Address:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**Email:** \_\_\_\_\_

Please send further information on the MSc and MSc(Tech) programmes at the University of Waikato.

## Course Presenters

**Assoc. Prof. Vic Arcus**  
Department of Biological Sciences  
University of Waikato

**Prof. Conan Fee**  
Department of Chemical and Process Engineering  
University of Canterbury

**Dr Mark Lay**  
Department of Engineering  
University of Waikato

**Dr Ryan Martinus**  
Department of Biological Sciences  
University of Waikato

**Dr Peter Moore**  
Former Director, FastTrak Separations  
GE Healthcare, New Jersey, USA

**Prof. Janis Swan**  
Associate Dean of Engineering  
University of Waikato

**Dr Johan Verbeek**  
Department of Engineering  
University of Waikato

## For More Information

Contact:  
Mark Lay  
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## Biotechnology Industry Short Course Proteins and Protein Purification



**13th - 15th April 2010, Hamilton**

[http://eng.waikato.ac.nz/industry\\_courses/](http://eng.waikato.ac.nz/industry_courses/)

## Biotechnology: Proteins and Protein Purification Short Course

This course features Dr Peter Moore, who was the Director (now retired) of Process Development at GE Healthcare (formerly Amersham Biosciences). Dr Moore's expertise is in downstream process development and method scouting for purifying bio-molecules. He has been instrumental in developing and installing many large-scale chromatographic processes for separating and purifying biologics such as speciality therapeutics and high-value proteins.

The course includes lectures on:

- Bioseparation techniques
- Protein measurement
- Protein stability
- Analytical separations (criteria of purity, protein analysis, sequencing, EMS)
- Chromatography and adsorption theory
- Chromatographic techniques (ion-exchange, hydrophobic interaction, affinity, dye ligand, immunoabsorbance)
- Production systems (column packing, process economics, media selection)
- Designing a separation strategy (optimisation, method scouting, process hygiene, scale-up)
- Validation and compliance procedures

The course also includes training in using GE Healthcare AKTA fast protein liquid chromatography (FPLC) equipment. Participants will also be introduced to the School of Science and Engineering's facilities such as the MALDI-TOF Mass Spectrometer and Biacore Surface Plasmon Resonance equipment for protein analysis and assays.

## Continuing Professional Development

You can choose to attend just the industry course, or gain life-long credit towards a Masters Degree by enrolling in a paper that includes the short course. Either way, you only need to attend the Waikato campus for the industry course. Arrangements will be made to offer the final examination in a local centre near you.

If you have a technical qualification (e.g.: NZCE, NZCS) plus work experience, you may be eligible to credit the course towards an MSc(Tech). This could be your path to career advancement, with a graduate degree, without leaving work. MSc and MSc(Tech) are Honours degrees – if you get good marks, you can go on to a PhD.

The MSc and MSc(Tech) degrees normally require four formally taught courses, plus a research project. The MSc(Tech) includes a course in Technology Management. The research component may be carried out at your place of employment with prior approval by the University. Both degrees may be carried out part-time and other distance education papers are available. Further information about these degree programmes is available.

## Fees

### Biotechnology: Proteins and Protein Purification Short Course

NZ\$1500 (incl. GST)

Registration closes: Monday, March 1st 2010

Payment due by: Monday, March 15th 2010

Cost includes course manual, course registration, lunches, dinners, morning and afternoon teas, and a certificate of completion. Accommodation and transport are not included.

### MSc or MSc(Tech) Course

NZ\$1500\* resource fee (incl. GST).

Enrol in ENMP522-10Y Biotechnology: Proteins and Protein Purification before February 26<sup>th</sup> 2010.

Fee includes short course registration plus distance learning materials, academic supervision, assessment, and final examination.

\*New Zealand citizens and permanent residents only. Costs for overseas students available on request. MSc course fees are currently under review and will be available mid October.