

Personal Views on RAEng VPs



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Department of Chemical Engineering

UCL – A Brief Introduction

- Established in 1826 to open up education in England **to students of any race, class or religion**
- **Rated top UK university** by research strength by REF 2014
- **Ranked 10th** in the 2019 QS World University Rankings
- **29 Nobel Prizes** (staff, alumni)
- **11 Faculties**, >100 Departments
- Around 12,000 **staff** (7,100 academics, 840 professors)
- >38,000 **students** (>17,000 UG, >20,000 PG)
- Gandhi, Ramsay, Bragg, JA Fleming, AG Bell, Pearson, Nolan, Coldplay
- **Budget** >£1.3B/year including >£500M in research



Department of Chemical Engineering

UCL Faculty of Engineering Sciences



- Biochemical Engineering
- Chemical Engineering
- Civil, Environmental and Geomatic Engineering
- Computer Science
- Electronic and Electrical Engineering
- School of Management
- Mechanical Engineering
- Medical Physics and Bioengineering
- Security and Crime Science
- Engineering & Policy (STePP)



Department of Chemical Engineering

UCL Chemical Engineering Department

Ranked 28th in the 2019 QS World University Rankings by subject 'Chemical Engineering'

- **28 Academics** (Assistant / Associate / Full Professor) and **11 Teaching Fellows**
- **Students:** >400 UG, ~80 MSc, >110 Ph.D.
- **>50 Post-Doctoral Research Assistants**
- Strong industrial collaborations from RAEng VPs, studentships, research projects, KTPs, **RAEng Fellowships**
- **>25 new grant proposals** awarded each year, worth **£3-5M** (UCL portion)
- Partners with **UCL Business** to support spin out companies (e.g., **Bramble Energy Ltd**) and IP protection



Prof. Marc-Olivier Coppens, Head of Department
Department of Chemical Engineering



UCL

UCL2034 Strategy

Principal Themes

1. Academic leadership grounded in intellectual excellence
2. A global leader in the integration of research and education, underpinning an inspirational student experience
3. **Addressing global challenges** through our disciplinary excellence and distinctive cross-disciplinary approach
4. An accessible, publicly-engaged organisation that fosters a lifelong community
5. London's Global University: in London, of London and for London
6. **Delivering global impact** through a network of innovative international activities, collaborations and partnerships



Department of Chemical Engineering

Departmental Implementation

1. Integrated Engineering Programme (IEP)
2. Integration of Research in Teaching
3. Integration of Industry within All Aspects of Academic Activities:
 - Masters programmes in connection with industry
 - Global Management of Natural Resources (started in 2016-2017, now attracts >160 applications per annum)
 - Year in Industry (first student to graduate in 2019, companies involved include DAI, BP, BASF, JM)
 - Extramural Year (undergraduate programme)
 - Industrial Expert Presentations to Students
 - Research Collaborations
 - Outreach and empowering of under-represented minorities
 - **RAEng Visiting Professors**



Integrated
Engineering
Programme

2018 Higher Education Academy's
Collaborative Award for Teaching
Excellence (CATE)

Department of Chemical Engineering

RAEng Visiting Professors

1. Dr Nick Hazel (formerly of BP) – 2017-2020

- Out of the box solutions
- Natural Gas Processing
- IP protection
- CV and Interview preparation

2. Dr Shahana Buchanan (Nestle) – 2018-2021

- Safety

3. Dr Thoralf Hartwig (GSK) – 2018-2021

- In collaboration with Biochemical Engineering
- Particulate Processing (Pharmaceuticals)
- Research Projects and Year in Industry
- CV and Interview preparation
- Outreach

4. Dr Vania Santos-Moreau (IFPEN) – 2019-2022

- Process Modelling across the curriculum
- CV and Interview preparation
- Outreach



ROYAL
ACADEMY OF
ENGINEERING

Department of Chemical Engineering



Personal Reflections

1. Why are RAEng VPs successful?

- They are experts
- They bring 'fresh air'
- They approach academic issues with industrial attitude
- They quickly identify what is important
- They focus on what they know and like
- They are flexible and dynamics
- The students relate to their experience

2. What are possible pitfalls?

- Overstretched commitments (you can say 'no')
- Too high expectations (they are students)
- Follow too closely established procedures
- Remain on the side-line