

Plumber, Procrastinator and a Lover of Learning

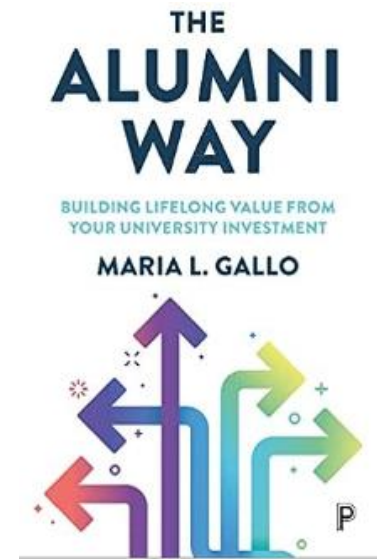
Presentation to NC Built Environment & HNC Construction Management
Students @ UHI Perth 11/12/2024

Dr Mike Murray *BSc (Hons), MSc, PhD, AMICE, SFHEA*
Senior Teaching Fellow
Department of Civil and Environmental Engineering

Perth College: My Alma mater (nourishing mother) 1980-1986



Alumni are like bees to the university hive. We explore far away fields collecting pollen. We enable flowers and plants to pollinate, bloom and thrive. As we return to the hive, we release our collective wisdom, to ensure the hive prospers, creating the nourishment for others-and for ourselves. Without the return of these alumni bees, the hive is merely a shell. As alumni, we are the key external connections in the university biosphere (p.39)



I own a Gate!



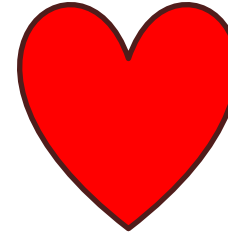
December 1979: A Plumber and an Anaesthetist



Perth High School



Loving Learning Journey



2021: Senior Fellow HEA (PR234083)

2017: Fellow HEA (PR134470)

2015-2016: PG Certificate learning and teaching in HE, University of Strathclyde, Glasgow.

1998-2003: PhD Construction Management, University of Strathclyde, Glasgow.

1995-1996: MSc Construction Management, Heriot Watt University, Edinburgh.

1992-1995: BSc (Hons) 1st Class, Building Engineering and Management, Napier University, Edinburgh.

1990-1992: Certificate in Education (Cert-Ed) Brooklands College of Technology, Surrey.

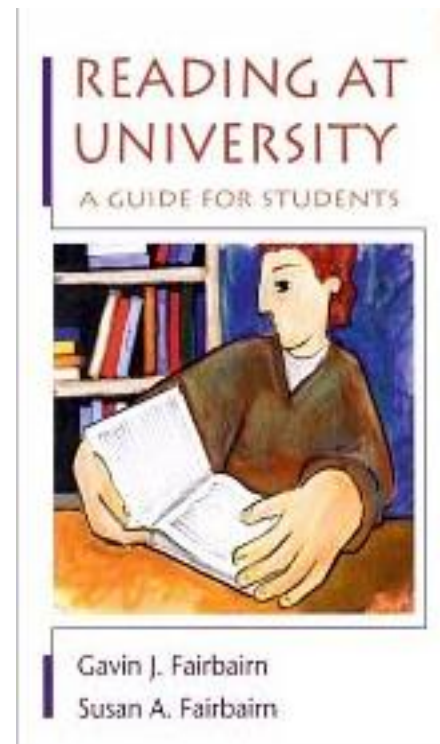
1988-1990: BTEC Higher Certificate in Building (HNC), North-East Surrey College of Technology, Surrey.

1984-1986: SCOTVEC Certificate in Building (ONC), Perth College of Further Education.

1980-1984: City & Guilds Craft / Advanced Craft Plumbing, Perth College of Further Education.

1980: Craft Building Link Class certificate.

Loving learning in Perth: Where?



Perth College of Further Education

This Certificate is awarded to

MICHAEL MURRAY



who successfully completed the Course in

MURRAY MICHAEL	BUILDI
ATT 183/190 PLACE	1/ 16
PLUMBING PRACTICAL	50 C
PLUMBING THEORY	64 B
CRAFT SUITABILITY	75 A
PAINING PRACTICAL	63 B
PAINING THEORY	60 B
CRAFT SUITABILITY	65 B
ASSOCIATED STUDIES	78 A
INTEREST IN COURSE	75 A
EFFORT ON COURSE	75 A
PUNCTUALITY	75 A

MURRAY MICHAEL	BUILDI
ATT 183/190 PLACE	1/ 16
CARPENTRY PRACTICAL	66 B
CARPENTRY THEORY	63 B
CRAFT SUITABILITY	65 B
BRICKWORK PRACTICAL	43 D
BRICKWORK THEORY	60 B
CRAFT SUITABILITY	65 B
BUILDING DRAWING	60 B
INTEREST IN COURSE	75 A
EFFORT ON COURSE	75 A
PUNCTUALITY	75 A

during

January/May, 1980

Principal

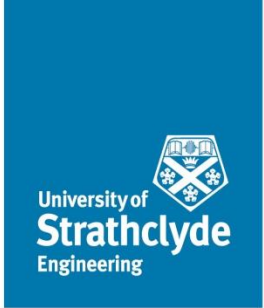
Head of Department

Perth College Plumbing Apprentices 1982



Plumber, Procrastinator and a Lover of
Learning

The Perth College years 1980-1986



1984-1986: SCOTVEC
Certificate in Building (ONC)



SCOTTISH VOCATIONAL EDUCATION COUNCIL
CERTIFICATE
IN
BUILDING

This is to certify that MICHAEL DAVID MURRAY
has gained the above named award having satisfactorily completed a course of study which comprised the
following subjects:

Subject	Grade	Date
200-05 General Studies III	2	May 1986
201-01 Construction III	3	May 1986
201-02 Contract Procedure	3	May 1986
201-03 Science and Services	2	May 1986
201-04 Measurement & Specifications (B & A)	2	May 1986
201-05 Mathematics III	3	May 1986

Date 30 October 1986

Reference 201/084/8564422

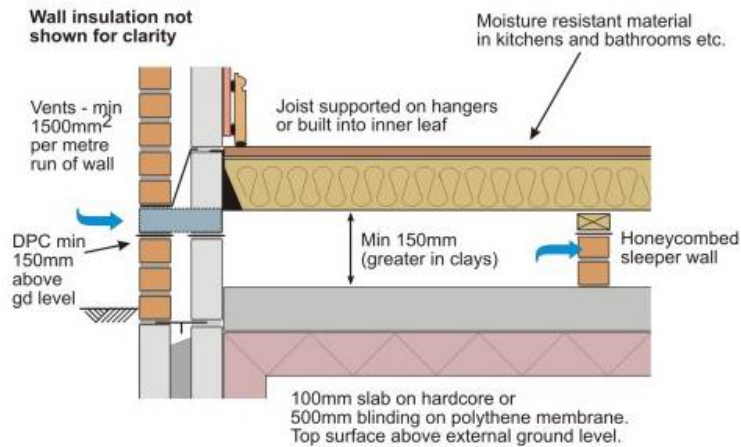
John Cool
Chief Executive

1980-1984: City & Guilds
Craft / Advanced Craft
Plumbing.

1980: Craft Building Link
Class certificate.

1984-1986: SCOTVEC Certificate in Building (ONC)

Authentic Learning



2020!

Book Learning meets on Site learning !

Explicit Knowledge & Tacit Knowledge

Knowing That & Knowing How

Employment History

2020-Present: Senior Teaching Fellow in Construction Management, Department of Civil & Environmental Engineering, University of Strathclyde, Glasgow

2013-2020: Teaching Fellow in Construction Management, Department of Civil & Environmental Engineering, University of Strathclyde, Glasgow

1999- 2013: Lecturer in Construction Management, Department of Civil & Environmental Engineering, University of Strathclyde, Glasgow.

2011- 2012: External tutor part time (online) University of Bath, MSc International Construction, Distance Learning Module (Social Responsibility: Business and Society).

2006- 2012: External tutor & Dissertation Supervisor part time (Undergraduate & Postgraduate Construction Management & Technology Modules) The College of Estate Management, University of Reading.

1997 - 2000: Visiting Lecturer part time (MSc Construction Management) Department of Building Engineering and Surveying, Heriot Watt University, Edinburgh.

1998 - 1999: Research Assistant (EPSRC Research Grant) Department of Civil Engineering, University of Strathclyde, Glasgow.

1997 - Dec 1997: Lecturer in Building Technology & Management Department of Building and Surveying, Robert Gordon University, Aberdeen.

1996 - May 1997 (Part Time) Lecturer in Building Technology & Management (PT) Department of Building, Fife College of Higher Education, Kirkcaldy.

1988 - 1992: Lecturer in Plumbing and Building, Department of Building, North-East Surrey College of Technology, Epsom.

1987 - 1988: Lecturer in Plumbing and Building, Department of Building, Borders College of Further Education, Galashiels.

1980 -1986: Apprentice Plumbing & Heating Engineer (1980-1984) & Journeyman Plumbing & Heating Engineer (1984-1986), Adam Denham Plumbers, Perth.

Borders College, Galashiels 1987-1988



*“There is nothing
here for you son”*



North-East Surrey College of Technology 1988-1992



Lecturer in Plumbing (Opportunities for Study- HNC & Cert-Ed)

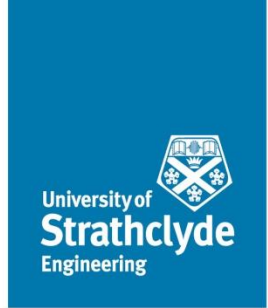


Would you like to visit Romania & refurbish an orphanage? 1991




Plumber, Procrastinator and a Lover of Learning

University of Strathclyde 1988-Current



University of Strathclyde Glasgow

Home **Profiles** Research units Research output Projects Datasets Equipment



Michael Murray
Dr
Senior Teaching Fellow, Civil And Environmental Engineering
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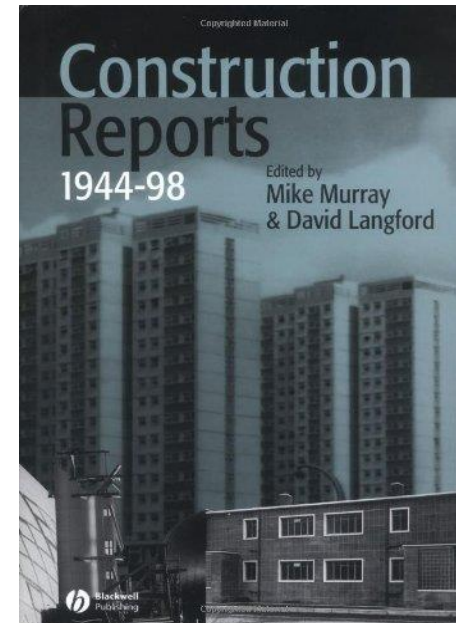
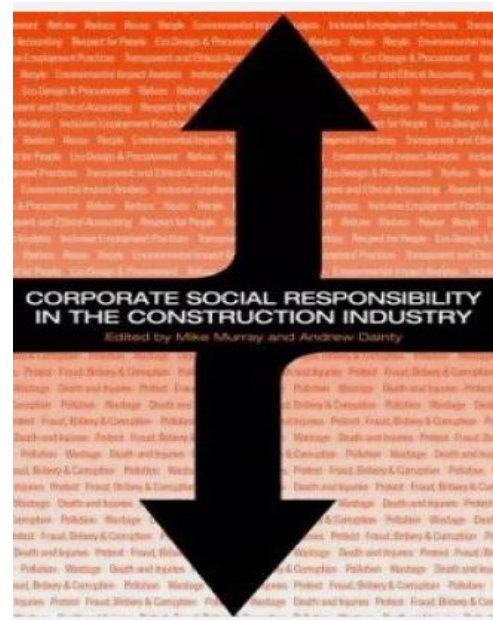
Email
m.d.murray@strath.ac.uk
United Kingdom

[View Scopus Profile](#)

Overview Fingerprint Network Projects (9) **Research output (81)** Prizes (10)

Research output

20	18	16	14	13
Other contribution	Article	Chapter	Paper	More



Perth High School 1978: Remedial class for English!

My Teaching & Learning Philosophy

Punk



Do it Yourself.
Don't ask for
Approval

'Universities are Socratic by conformity. Dissent is their life blood. No one worthwhile joins a university to be told what to do' (Hills, G and Lingard, R. (2004) *UHI: The Making of a University*, Edinburgh: Dunedin Academic Press, p.224

Pirate



Unorthodox Practice

Guerilla



Small Scale Raids Behind
Formal Programme

Graham
Hills, VC-
Strathclyde
1980-1991



Possible Selves & Anticipatory Socialisation



- In the view of the authors, one of the most important roles that an industrial mentor can play is to help motivate students towards learning what is useful and what might make them a better engineer rather than just focusing on grades, which unfortunately in the university setting, is the preoccupation of many students (Broadbent and McCann 2016 p.23).

Broadbent, O., and E. McCann. (2016). Effective industrial engagement in engineering education – A good practice guide, Royal Academy of Engineering, <https://www.raeng.org.uk/publications/reports/effective-industrial-engagement-in-engineering-edu>

Gate Opener Travels & Strathclyde

- Cape Town (South Africa)
- Santiago (Chile) & Easter Island
- Rome (Italy)
- Aleppo & Damascus (Syria)
- Port of Spain (Trinidad & Tobago)
- Paris (France)
- Dubrovnik (Croatia)











Iona Gate! (White Strand of The Monk)

An open gate is your invite to travel

Unplanned Journey: The Gate Openers

- 1979 to Perth College 
- 1984-1986 ONC whilst in trade 
- 1987 temporary lecturer @ Perth Tec 
- 1988 Borders College colleague guide 
- 1988-92 NESOCOT development study 
- 1998- Research Assistant post at Strathclyde 

Your future is unwritten !



- Serendipity is not serendipitous-you have to work at it!
- You miss 100% of the shots you don't take
- Curiosity is king, and Queen, and Prince!
- Follow your heart, and let your head catch up!
- Have your radar on and be alert for opportunities / wise guidance (**gate openers**)
- The rock in your path is your path
- Be yourself, trust yourself
- Help others along the way (best way to learn)
- Take time to stop and reflect on your experience

A Place of Useful Learning

THE PLACE OF USEFUL LEARNING

www.strath.ac.uk

UNDERGRADUATE PROSPECTUS 2025 ENTRY

CIVIL ENGINEERING

MEng (UCAS H202)/ BEng Honours (UCAS H200)

Civil Engineers plan, design, construct and operate the major infrastructure systems on which our society depends including transport, water and energy systems as well as major buildings and other structures.

WHY CIVIL ENGINEERING AT STRATHCLYDE?

Ranked Number 1 in Scotland and Number 3 in UK for Civil Engineering (Guardian University Guide 2024). Unique opportunities to participate in industry-led problem-based learning and mentoring.

The only Engineering Department in Scotland to hold a Gold Athena Swan Award, and one of only three Gold awards in Engineering across the UK for our work supporting women in Engineering.

Group projects to design infrastructure for developing countries.

Our students regularly win national competitions. Opportunities to study abroad.

Professional accreditation by the Institution of Civil Engineers, Institution of Structural Engineers, and the Chartered Institution of Highways and Transportation.

ENTRY REQUIREMENTS

Required subjects are shown in brackets

MEng

Highers (Standard Entry Requirements): AAAA/AAAB (Maths A OR Maths B & 1 Science at A or B)

***Highers (Minimum Entry Requirements):** ABBB or BBBB (Maths A or Maths B & 1 Science at B)

A Levels: Year 1 entry: AAB-BBB (Maths A OR Maths B & 1 Science at A or B); Year 2 entry: A*AA-AAAB (Maths A OR Maths B & 1 Science at A or B)

IB: Year 1 entry: 36-32 (Maths HL5 & 1 science subject HL5); Year 2 entry: 38-34 (Maths HL6 & 1 science subject HL6)

HNC/HND: entry to BEng in the first instance

BEng Honours

Highers (Standard Entry Requirements): AAAB/AAABB (Maths A OR Maths B & 1 Science at A or B)

***Highers (Minimum Entry Requirements):** BBBB (Maths A OR Maths B & 1 Science at B)

A Levels: Year 1 entry: ABB-BBB (Maths A OR Maths B & 1 Science at A or B); Year 2 entry: AAA-ABB (Maths A OR Maths B & 1 Science at A or B)

IB: Year 1 entry: 34-32 (Maths HL5 & 1 science subject HL5); Year 2 entry: 36-34 (Maths HL6 & 1 science subject HL6)

HNC/HND: Year 1 entry: HNC Civil Engineering, Structural Engineering or Construction Engineering with A in Graded Unit and pass in Maths for Construction; Year 2 entry: HND, subjects as for HNC, with BA in Graded Units and pass in Maths for Construction

Additional Information

Deferred entry is accepted
SQA Higher Applications of Mathematics is not accepted instead of Higher Mathematics

Both IB Higher Level Mathematics pathways are accepted

Science subjects accepted are Biology, Chemistry, Engineering Science, Human Biology or Physics

CONTACT

+44 (0)141 574 5484
eng-admissions@strath.ac.uk

YOUR CAREER

Recent employers include Atkins, Mott MacDonald, AECOM, Jacobs, BAM Nuttall, COWI, Laing O'Rourke, Systra, RJ McLeod, I & H Brown, WSP, Balfour Beatty, ScottishPower, Scottish Water and Wood.

Recent graduate roles include:

Consultant
Designer
Civil Engineer
Bridge Engineer
Transportation Engineer
Ports & Maritime Engineer

YOUR STUDIES

Year 1: topics include maths, mechanics, structural analysis, sustainable materials, computer-aided drawing and design

Year 2: you learn about structures, geotechnics, water engineering, surveying and mapping, and chemistry and materials science

Year 3: topics in structures, geotechnics, water engineering, transport, global development, environmental engineering and construction management; opportunity to study abroad

Year 4: applied structural engineering, water engineering, geotechnical engineering, transport planning, environmental engineering and construction management

Year 5 (MEng only): engineering design including integrated group project plus advanced engineering topics, business and management, environment and sustainability; opportunity to study abroad

RELATED COURSE

Civil & Environmental Engineering

WIDENING ACCESS

For more information, search 'widening access' at www.strath.ac.uk

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UNDERGRADUATE PROSPECTUS 2025 ENTRY

THE ENGINEERING ACADEMY

(UCAS oBRT)

The Engineering Academy is a collaboration between the University of Strathclyde, partner colleges and industry.

WHY JOIN THE ENGINEERING ACADEMY AT STRATHCLYDE?

Become a registered Strathclyde student whilst studying towards an enhanced HNC at one of our partner colleges in Year 1.

Choose from three specially developed HNC programmes which allow progression directly into year 2 of a range of degree courses at Strathclyde.

Gain practical engineering skills experience.

Opportunity to apply for paid summer placements which are secured specifically for Engineering Academy students and can lead to graduate job opportunities.

Dedicated support throughout the duration of your studies.

ENTRY REQUIREMENTS

Required subjects are shown in brackets

Highers (Standard Entry Requirements): BBBC (Maths at B and Physics/Engineering Science at B); Biology/ Human Biology at B also required for progression to Biomedical Engineering. For Chemical Engineering, Physics is not required but Higher Maths at B and Higher Chemistry at B are required.

***Highers (Minimum Entry Requirements):** BBCC (Maths at B and Physics/Engineering Science at B); Biology/ Human Biology at B also required for progression to Biomedical Engineering. For Chemical Engineering, Physics is not required but Higher Maths at B and Higher Chemistry at B are required.

Additional Information

Deferred entry is accepted

SQA Higher Applications of Mathematics is not accepted instead of Higher Mathematics

Access qualifications are also considered

Foundation Apprenticeship will be accepted as one of the non-mandatory Highers

Application to the Engineering Academy is via UCAS

CONTACT

+44 (0)141 574 5484
eng-admissions@strath.ac.uk

YOUR STUDIES

The Engineering Academy provides a pathway to an Engineering BEng Honours degree course (with the option to transfer to the MEng) within one of the Faculty's participating departments. Companies who engage with the Engineering Academy include Wood, Castle Precision Engineering, DEME Offshore, Alexander Dennis, Ineos and Glenmorangie.

Your first year is taken as an enhanced HNC programme at one of the partner colleges, together with practical skills units and university activities which take place at Strathclyde. Students who complete the enhanced HNC award, gain an A in the Graded Unit and engage with Strathclyde activities are guaranteed direct progression into one of our undergraduate degree courses:

HNC Chemical Engineering allows you to progress to Year 2 of the BEng Honours Chemical Engineering degree.

HNC Electronics allows you to progress to Year 2 of the BEng Honours Electronic & Electrical Engineering degree.

HNC General Engineering allows you to progress to Year 1 of the BEng Honours Biomedical Engineering degree and Year 2 of the following degrees:

- BEng Honours Civil Engineering
- BEng Honours Civil and Environmental Engineering
- BEng Honours Product Design Engineering
- BEng Honours Manufacturing Engineering with Management
- BEng Honours Sports Design Engineering
- BSc Honours Product Design and Innovation
- BEng Honours Mechanical Engineering
- BEng Honours Naval Architecture and Marine Engineering
- BEng Honours Naval Architecture with High Performance Marine Vehicles
- BEng Honours Naval Architecture with Ocean Engineering

For the most up-to-date course list please visit our website.