



University
of Glasgow

Mature student Access to Physics and Engineering degrees

Alec MacKinnon

Short Courses/School of Physics and Astronomy

**WORLD
CHANGING
GLASGOW**

THE SUNDAY TIMES
GOOD
UNIVERSITY
GUIDE
2018
SCOTTISH
UNIVERSITY
OF THE YEAR

“Mature” students (according to UCAS)

“Mature students are anyone over the age of 21 who didn't go to university after school or college. Some might have taken gap years to volunteer and travel the world, while 40% of mature students are over 30 and have had work, mortgage, or family responsibilities

.....Around a third of undergraduates are mature students – of all ages and backgrounds.”

Adult Learning in Scotland Statement of Ambition



Adult Learning in Scotland Statement of Ambition



Education Scotland, 2014

Adult learning: why?



1.1 Adult learning is essential to enable and encourage adults in Scotland to acquire the knowledge, skills and confidence necessary to play an active and productive role, both personally and societally

Adult learning: why?



1.7 Changes in personal life, family life, working life or community life can be a stimulus to new learning. These changes can occur at any age. Successful and relevant learning provides a means to negotiate life's transitions and can reduce stress, conflict and, potentially, the need for state intervention.

Adult learning: why?



1.9 Adult learning is at the core of a Scottish knowledge-based society. It drives the development of an improved personal skill base, increases the focus on achieving better outcomes for communities, and provides improved life chances.

- Extra-mural Department from 1952 (“DACE” from 1985)
- **Access** programme from 1979, “...based on the conviction that there are many adults potentially able to benefit from higher education who have not had the opportunity”
- Aims to provide a preparation for degree study, paying attention to the needs and circumstances of adults returning to education
- NB Scottish Wider Access Programme from ~1985



Access students prepare for study by studying **two subjects in depth**

Accepted for most degrees in University of Glasgow, except Medicine/Dentistry/Vet

Unique(?) among Scottish in-house programmes in giving access to sciences

Assessment: combination of coursework/final exam, mirroring Level 1 assessment practices

GUIDANCE!!

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Arts & Social Sciences <small>Law, Business & Accounting</small>		Psychology (d): 10am -12 noon		English Literature (d): 10am -12 noon	
		Sociology (d): 1-3pm	Scottish History: 1-3pm Law: 4-6pm	Medieval History: 1-3pm	
	Philosophy: 6-8pm Psychology (e): 7-9pm	History of Art: 6.30-8.30pm English Literature (e): 6.30-8.30pm Economics: 7-9pm	Social & Economic History: 6.30-8.30pm Classical Studies (Greece & Rome): 7-9 pm	Politics: 6-8pm Sociology (e): 6.30-8.30pm Theology & Religious Studies: 7-9pm	
Sciences	Chemistry: 6.30-9.30pm	Physics: 6.30-9.30pm	Biology: 6.30-9.30pm	Mathematics: 6.30-9.30pm	

- Flawed decision-making in entering the programme
- Students' experience of the programme and institution generally
- Failure to cope with academic demands
- Events in students' lives external to the institution

Physics: Mechanics, Gas Laws, Waves and Optics, Electricity, a little “modern physics”

Maths: basic algebraic skills; trigonometry, powers and logarithms; sets and functions; derivative, integral, extrema, simple differential equations; sequences and series; vectors

Generally straddling SQA Higher/University level 1

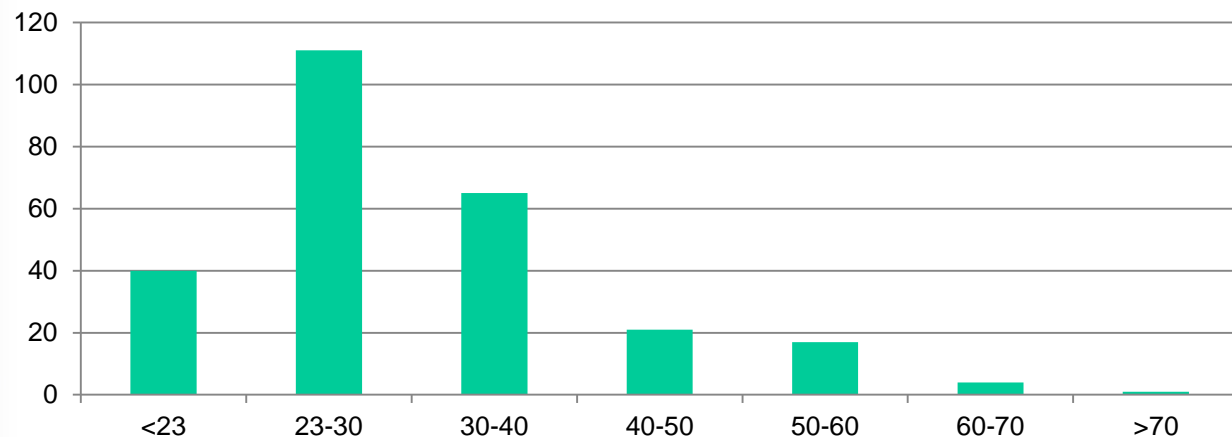
Aiming also to develop generic skills, e.g. problem-solving

- Huge range of motivations:
 - Changing perception of relevance of education
 - Changing employment circumstances
 - Degree after a career
 - Women chased away from science
 - People who were ill in high school, had family difficulties, got pregnant....
- Impostor's syndrome!

Access continues to grow!

Academic year	Number starting Access	Number completing (i.e. gaining grades >D for both subjects)	Number progressing via UCAS (% of initial enrolments)
2016-17	248	141	124 (50%)
2015-16	191	106	84 (44%)
2014-15	183	112	92 (50%)

Distribution over age, 2017-18 (N=270)

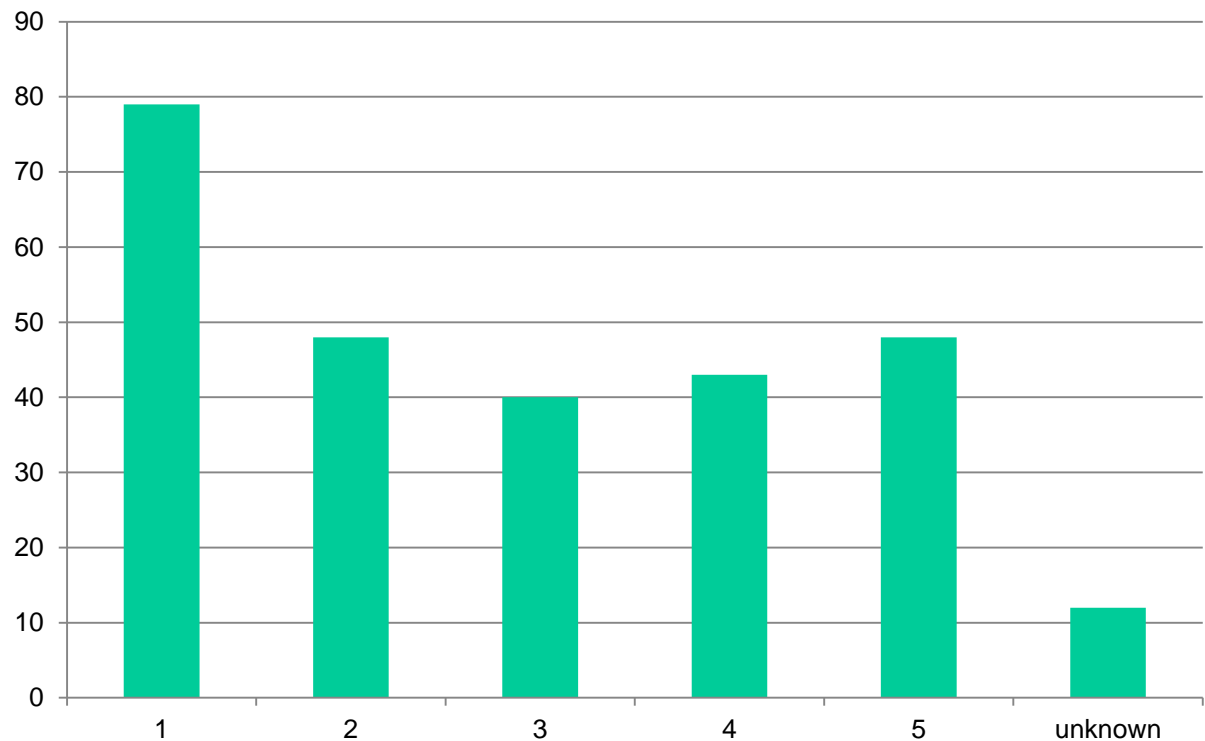


“SIMD” = Scottish Index of Multiple Deprivation

Ranks all **postcodes** in Scotland by several measures of deprivation

Used extensively in Scottish WP policy

Distribution over SIMD quintile, 2017-18
1 = most deprived; N= 270



- E.g. 2016:
- Aero Engineering 1
- Civil Engineering 1
- Computing Science 2
- Electrical/Electronic Engineering 4
- Mathematics 1
- Physics 2
- In Glasgow; one or two more to Engineering degrees elsewhere

Conclusion: mature students

- Bring great personal strengths to study
- Will have self-reliance and motivation to overcome any gaps in preparation
- But may also have greater external pressures: family, financial, health
- Should be increasingly important:
 - Demography
 - Changing patterns of employment
 - WP
- People who wish to grow and develop:
Embrace them!