

## **Department of Economics**

Offer holder webinar  
14 May 2024

## **Masters in Economics programmes**

# Greetings from the Head of Department



**Dr Michael Naef**  
**Professor,**  
**Head of Department of Economics**

# Who we are



**Dr Vsevolod Ostapenko**  
Programme Director



**Dr Nourin Shabnam**  
Deputy Programme Director



**Dr Ibrahim Inal**  
Associate Professor,  
Deputy Director of Education



**Dr Lucia Sbragia**  
Associate Professor,  
Module Leader in  
Natural Resource Economics



**Dr Andis Sofianos**  
Associate Professor,  
Module Leader in  
Behavioural Economics



**Judith Lines**  
Learning and Teaching  
Manager



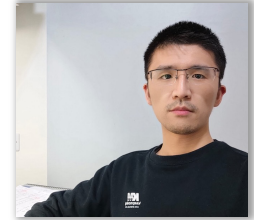
**Betty Tong**  
MSc Economics graduate,  
Account Manager,  
The People's Insurance  
Company of China (PICC)



**Asmi Pillai**  
MSc Economics student



**Imeth Kapuruge**  
MSc Economics student,  
Course Representative



**Xudong Shen**  
MSc Economics student

# Brief outline

- **Few words about Durham**
- **Overview of Economics programmes**
  - Timeline, modules, how we teach
- **Networking, events and extra-curricular activities**
- **Student life**
- **Employability and career support**
- **Q&A**



# Our University and Business School

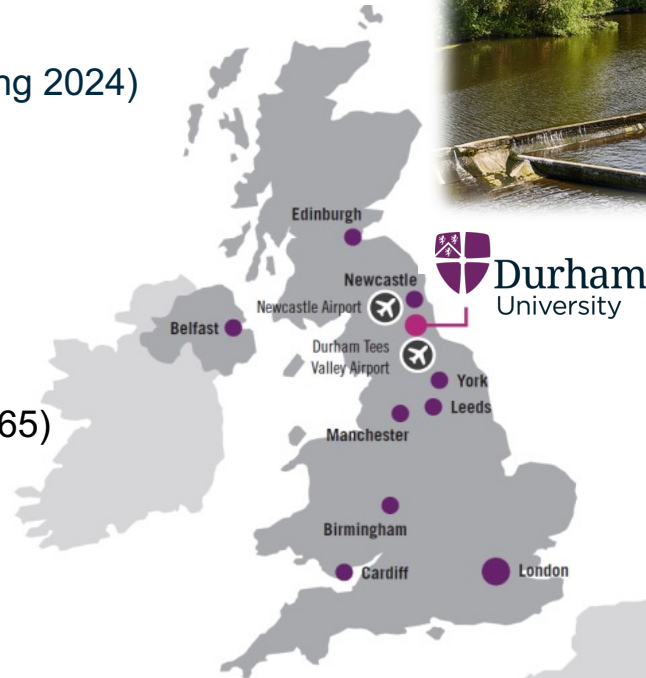
## Durham University

- England's third oldest University (founded in 1832)
- Located in the historic city of Durham
  - Part of a UNESCO World Heritage Site
- One of a small group of traditional collegiate universities in the UK
- A World **Top 100** University (QS Ranking 2024)



## Durham University Business School

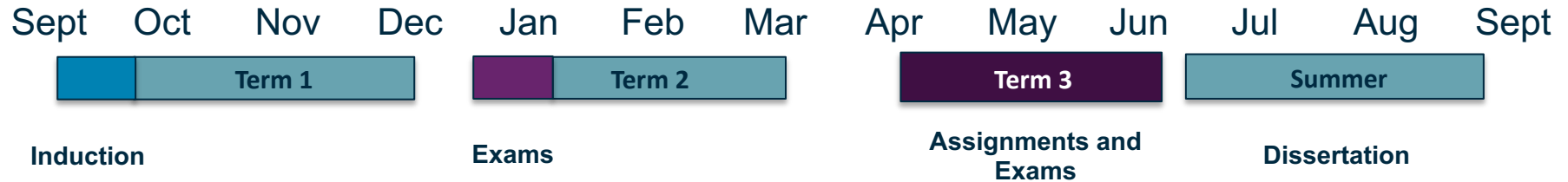
- Part of elite worldwide group of **triple-accredited** Business Schools
  - AACSB + AMBA + EQUIS
- One of the longest established Business Schools in the UK (founded in 1965)
- Four departments
  - Accounting, **Economics**, Finance, Management and Marketing



# Degree routes

- I. **MSc Economics**
- II. **MSc Environmental and Natural Resource Economics**
- III. **MSc Behavioural Economics**

# The programme at a glance: timeline



You must get **180\* credits** to be awarded a degree

- Credit is a measure of workload (1 credit  $\approx$  10 hours of learning)
- **120 credits** = core and optional modules (each module is worth 15\* credits)
- **60 credits** = dissertation
- You will normally study 4 modules in term 1 and 4 modules in term 2

\* Foreign language module is worth 20 credits  $\Rightarrow$  if you take it, the total number of credits is 185

# The programme at a glance: modules

## Pre-sessional online modules

- (1) Introduction to Economics
- (2) Mathematics and Statistics

## Core modules

### For all routes:

- (1) Advanced Microeconomics
- (2) Advanced Macroeconomics
- (3) Econometric Analysis
- (4) Time-Series Analysis **OR** Microeconometrics
- (5) Dissertation

### Additionally for MSc Environmental and Natural Resource Economics:

- (6) Environmental and Climate Economics
- (7) Natural Resource Economics

### Additionally for MSc Behavioural Economics:

- (6) Behavioural Economics
- (7) Experimental Economics

## Optional modules

- Environmental and Climate Economics\*
- Natural Resource Economics\*
- Behavioural Economics\*\*
- Experimental Economics\*\*
- Time-Series Analysis / Microeconometrics
- Development Economics
- Game Theory
- Industrial Organisation
- International Trade and Finance
- Market Microstructure
- Money and Banking
- Foreign language

\* Not applicable to MSc Environmental and Natural Resource Economics

\*\* Not applicable to MSc Behavioural Economics



# How we teach

- Lectures
- Small group activity
  - Seminars
  - Workshops / practical sessions
  - Dissertation meetings with your supervisor
- Private study
  - Reading
  - Problem sets
  - Presentations
  - Assignments
- Assessment
  - Coursework + written examinations

**SUMMATIVE ASSIGNMENT 1 – ECON42515**  
Behavioural Economics

Choose one of the three papers listed below. For the paper you have chosen you need to write a short referee report. The referee report must contain:

- A brief summary description of the paper which outlines the research question, motivation, and research method. Make sure to also include the strengths and important contributions of the paper.
- A detailed discussion of limitations or concerns you might have about the motivation, experimental design (if applicable), data analysis, and interpretation of the results.
- Idea for further research given the results and/or limitations of the chosen paper.

1. Alem, Y., Kocher, M. G., Schütz, S., Carlsson, F., & Lindahl, M. (2023). Distributional preferences in adolescent peer networks. *Experimental Economics*, 26(1), 223-248.
2. Berggren, N., & Björnskov, C. (2023). Does globalization suppress social trust?. *Journal of Economic Behavior & Organization*, 214, 443-458.
3. Ortmann, A., Ryykin, D., Wilkening, T., & Zhang, J. (2023). Defaults and cognitive effort. *Journal of Economic Behavior & Organization*, 212, 1-19.

The assignment should be written efficiently and take great care on the exposition and format.

Overall word limit: 750

**ECON 42515 2023**  
Advanced Macroeconomics, 2023  
Summative Assignment  
Word Limit: 1000 words (words in code and computer outputs do not count)  
Deadline of submission: 8 December, 2023

Consider the following social planning problem:

$$\text{Max}_{\{c_t\}} E_0 \int_0^{\infty} \beta^t \left[ \frac{Z_{1,t} C_{1,t}^{1-\sigma}}{1-\sigma} \right]$$

s.t.

$$\text{Resource Constraint: } C_t + I_t = A_t K_t^\alpha$$

$$\text{Investment Technology: } K_{t+1} = (1-\delta)K_t + Z_t' I_t$$

where  $C_t$  = consumption at date  $t$ ,  $I_t$  = investment at date  $t$ ,  $K_t$  = pre-determined capital stock at date  $t$ ,  $\alpha$  = capital share,  $\sigma$  = risk aversion coefficient and  $\beta$  is the subjective discount factor. There are three shocks, namely preference shock ( $Z_t^1$ ), investment specific technology shock ( $Z_t^2$ ) and a TFP shock ( $A_t$ ). Labour is inelastically supplied at the unit level.

The three shocks evolve as the following three AR(1) processes:

$$Z_t^1 - \bar{Z}^1 = \rho_{z1}(Z_{t-1}^1 - \bar{Z}^1) + \varepsilon_{z1,t}$$

$$Z_t^2 - \bar{Z}^2 = \rho_{z2}(Z_{t-1}^2 - \bar{Z}^2) + \varepsilon_{z2,t}$$

$$A_t - \bar{A} = \rho_A(A_{t-1} - \bar{A}) + \varepsilon_{A,t}$$

where  $\rho_{z1}, \rho_{z2}, \rho_A$  are the autoregressive coefficients of the respective shocks.  $\{\varepsilon_{z1,t}\}$ ,  $\{\varepsilon_{z2,t}\}$ ,  $\{\varepsilon_{A,t}\}$  are mutually independent white noises associated with each of these three respective shocks.  $\bar{Z}^1, \bar{Z}^2, \bar{A}$  are the steady state levels of these three respective shocks.

- Derive the Euler equation carefully explaining each step and the underlying intuitions. (20 pts)
  - Derive the steady state variables showing all your work. (20 pts)
  - Now write dynare code for this problem fixing  $\bar{A} = \bar{Z}^1 = \bar{Z}^2 = 1$ ,  $\rho = 0.99$ ,  $\alpha = 0.36$ ,  $\delta = 0.025$ ,  $\rho_A = 0.9$ ,  $\rho_{z1} = 0.9$ ,  $\rho_{z2} = 0.9$ ,  $\sigma = 2$ . (30 pts)
  - Based on your dynare output, write a report within 1000 words explaining your results. (30 pts)
- Must submit your code and dynare output together with your

**SUMMATIVE ASSIGNMENT 2 – ECON40615**  
Environmental and Climate Economics

Answer ONE questions out of the following. Each part of a question is equally weighted unless otherwise stated.

**Question 1.** Consider the papers by Newell and Pizer (2003), Montero (2002), Mideksa and Weltzmann (2018) and Lynn et al. (2014). Relate your answers to the questions below to these four papers, citing them in the appropriate parts of your responses.

- Explain the generalization examined in Newell and Pizer (2003), Montero (2002), and Mideksa and Weltzmann (2018) relative to Weltzmann's original contribution.
- Explain the implications of these generalizations regarding the regulator's choice of a quantity versus a price instrument.
- Discuss one environmental issue for each paper for which the particular generalization matters. If possible, do not use the examples provided in the papers.
- Discuss the role of firm heterogeneity in Lynn et al. (2014) and relate the empirical results obtained in this paper to the regulator's choice of a quantity versus a price instrument.

**Question 2.** Consider the papers by Golosov et al. (2014), Nordhaus (2015), Nordhaus (2018) and Patt et al. (2022). Relate your answers to the questions below to these four papers, citing them in the appropriate parts of your response.

- What are the key roles that economists play in the climate debate?
- Describe the key features of the climate policies recommended in Golosov et al. (2014) and Nordhaus (2018). Describe also the main differences between the models used.
- Describe the similarities and the differences between Barrett (1994) and Nordhaus (2015).
- Describe the key differences between the frameworks of the Paris Agreement and the Kyoto Protocol.

Overall word limit: 2000

SEMINAR 1 V

February 25, 2024

1. Let  $\{(e_t, \eta_t, \xi_t)\} \sim WN(0, I_3)$  and consider the following processes

$$x_t = \sum_{i=1}^3 \xi_i + \sum_{i=1}^3 \eta_i + \xi_t$$

$$y_t = -\sum_{i=1}^3 \xi_i$$

$$z_t = \sum_{i=1}^3 \xi_i + \sum_{i=1}^3 \eta_i$$

(\*)

Show that no two of these processes are cointegrated but the three are cointegrated. What is the 5% critical value for the Engle-Granger test of cointegration of the three variables for a dataset  $\{(x_t, y_t, z_t)\}_{t=1}^{2017}$ ? Note: the supplementary manual for the textbook is available at [https://time-series.net/annuals\\_2000](https://time-series.net/annuals_2000).

2. Write the system in (\*) in VECM form.

3. Consider the VAR(1) model,

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \alpha_2 y_{t-2} + u_t, \quad y_{-1} = y_0 = 0, \quad \{u_t\} \sim WN(0, I_2)$$

Rewrite each of these cases in VECM form, state the cointegration rank, and highlighting the cointegration vector(s) if any.

(a)

$$y_t = \begin{bmatrix} 1 \\ 0 \end{bmatrix}, \quad \alpha_1 = \frac{1}{100} \begin{bmatrix} 0 \\ 1 \end{bmatrix}, \quad \alpha_2 = \begin{bmatrix} 1/2 & 1/4 \\ 1/4 & 1/2 \end{bmatrix}$$

(b)

$$y_t = \begin{bmatrix} 0 \\ 0 \end{bmatrix}, \quad \alpha_1 = \begin{bmatrix} 0 \\ 0 \end{bmatrix}, \quad \alpha_2 = \begin{bmatrix} 2/3 & 1/3 \\ 1/3 & 2/3 \end{bmatrix}$$

(c)

$$y_t = \begin{bmatrix} 1 \\ 1 \end{bmatrix}, \quad \alpha_1 = \begin{bmatrix} 0 \\ 0 \end{bmatrix}, \quad \alpha_2 = \begin{bmatrix} 3/4 & -1/4 \\ -1/4 & 3/4 \end{bmatrix}$$

\*to R code to simulate 500 observations from the processes in questions 1 and 3. Graphically state any long run relationships in the generated samples.

# Who will teach you

## Department of Economics:

- More than 40 members of academic staff
- Teaching is research-based
- Your lecturers do the top-notch research and have a strong publication record in their field
- Members of 6 research centres:
  - Centre for Experimental Methods and Behavioural Research
  - Centre for Environmental and Energy Economics
  - Centre for Macroeconomic Policy
  - Durham Research in Economic Analysis and Mechanisms
  - Centre for Banking Institutions and Development
  - Centre for Quantitative Research in Financial Economics

# 1:1 contact hours

## Academic advisers

- Individual discussion of various matters related to your personal academic performance
- Advice and feedback on your academic progress
- Recommendation letters at any point of your study

## Office hours

- Opportunity to raise questions related to the content of modules, assessment etc.
- Meetings with any member of staff:
  - Module leaders / lecturers
  - Seminar tutors

# Networking events and skills development opportunities



**Dr Nourin Shabnam**  
**Deputy Programme Director**

# Networking events

- **Induction**
- **Guest Speaker sessions / Career talks for students**
- **Public Lectures by high-profile academics and practitioners**

In 2023/24 academic year:

- Jonathan Haskell (Imperial College and Bank of England)
- Victoria Saporta (Bank of England)
- Dennis Tatarkov (KPMG)
- **Social events (student-staff gathering)**
  - MSc Christmas Dinner
  - Chinese New-Year Coffee and Snacks
  - MSc After Exam Dinner (due in early June)





# Optional training for skills development

- Econometrics drop-in sessions
- Stata training course (in 2022/23 academic year)
- Python training course (in 2023/24 academic year)



# Hear from our students: networking and support



**Asmi Pillai**  
**MSc Economics 23/24 student**



# Student life: colleges

A distinctive collegiate system:

- **17 Colleges**
  - Mixed communities of UG and PG students
    - Ustinov college – dedicated only to PG students
  - Students study across all subjects
  - Create a sense of belonging
  - **200+** clubs and societies
    - Dancing, cooking, memes, sports, board games...
  - Social events and dinners
  - Make friends for all your life!
  - Welfare and pastoral support



# Student support

We provide access to a wide range of support services to help you **feel well, comfortable** and **get the most** from your experience (immigration, healthcare, wellbeing, counselling, chaplaincy and faith etc.)

## Academic Skills Centre

- Comprehensive assistance for the development of various skills:
  - Academic writing
  - Managing with written/spoken assessments
  - Digital competencies
- Besides the taught sessions in different formats, there are drop-in sessions for more immediate assistance



# Adding to your experience: company tour (field trip)



**Dr Ibrahim Inal**  
**Associate Professor,**  
**Deputy Director of Education**

 中國銀行 倫敦分行  
BANK OF CHINA LONDON BRANCH

 中國銀行 (英國)有限公司  
BANK OF CHINA (UK) LIMITED







# Hear from our students: advice for applicants



**Xudong Shen**  
**MSc Economics 23/24 student**

# College life





# College life

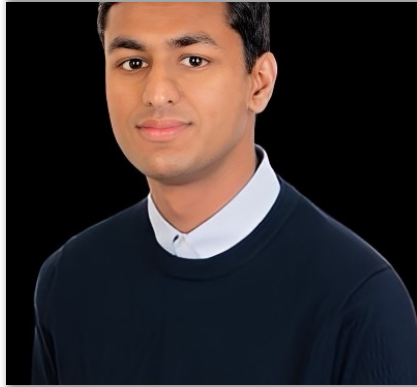


# Advice for applicants

- Review basic economics knowledge
- Complete the pre-sessional module Introduction to Economics
- Ask questions in office time
- Do not worry
- Study hard



# Hear from our students: what about future career?



**Imeth Kapuruge**  
**MSc Economics 23/24 student**

# Career support



- Dedicated Careers & Enterprise team
- Advice and guidance on career planning
- Offers you the opportunity to build your employability skills
  - Discovering career possibilities
  - Supporting with CV and applications
  - Preparing for job interviews
- Individual career appointments
- Organising a lot of employer events
  - Career fairs, forums, presentations, pop-up events...

# Hear from our graduates: reflections on studying and living in Durham



**Betty Tong**  
**MSc Economics 21/22 graduate**



# My Time in Durham

Betty Tong  
2024.5.14

# CONTENTS



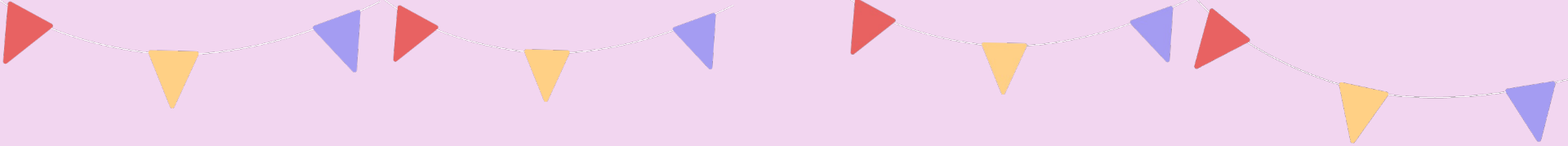
---

1、 Academic and Career Support

---

2、 Daily Life

---



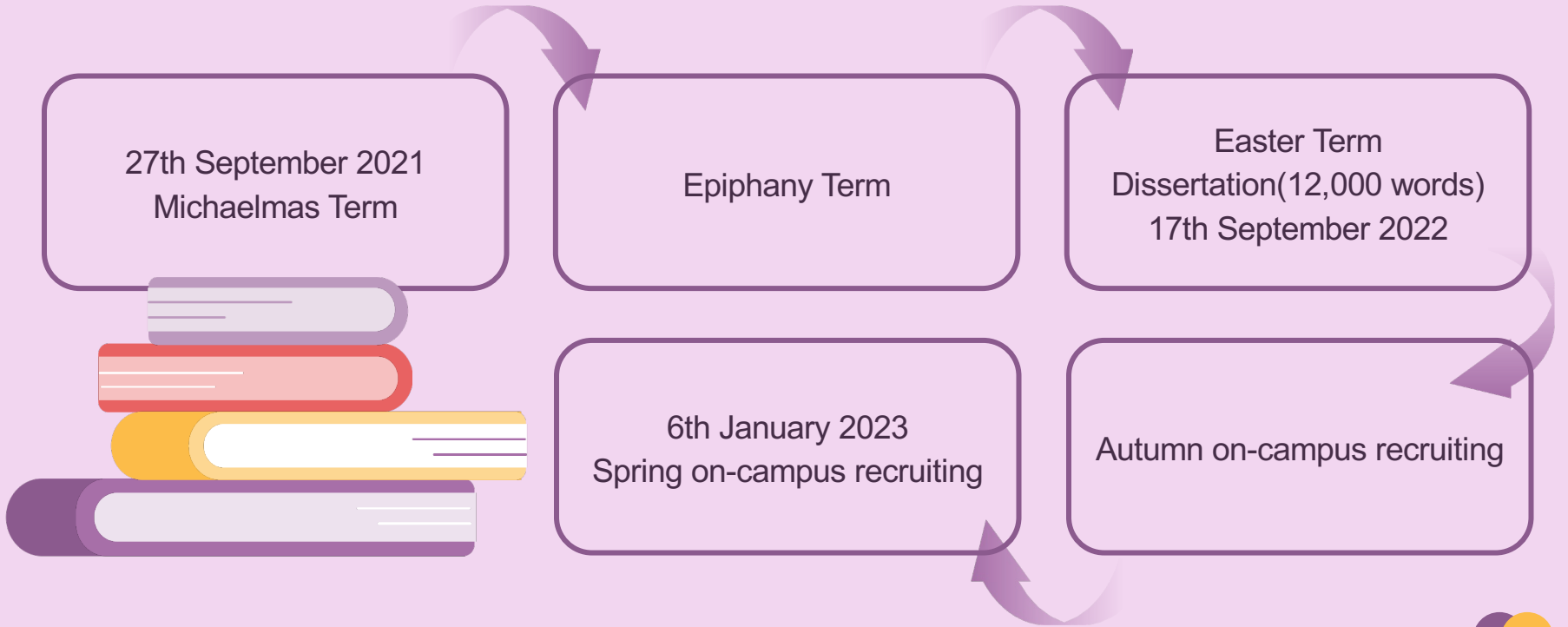
Part 1

# Academic and Career Support





# 1.1 Timeline



# 1.2 Departments

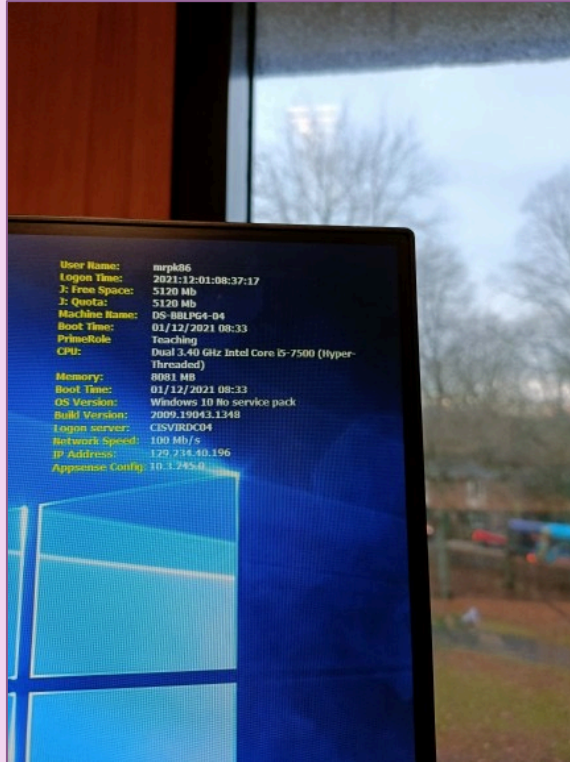


# 1.3 Libraries



01

**Bill Bryson Library  
Baker Research Library  
Teaching and Learning  
Centre**  
abundant learning resources  
and study space





02

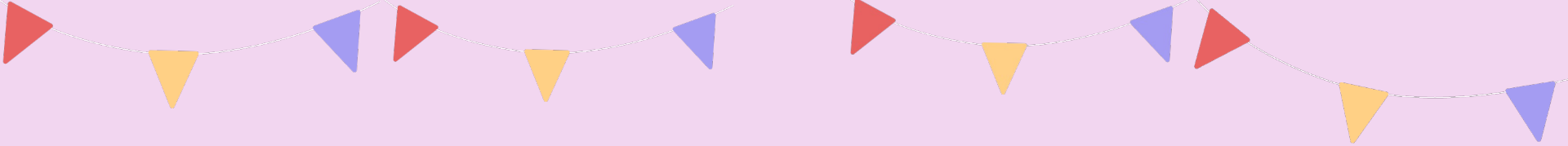
**Departments and Colleges**  
ample study space,  
computer and printing  
facilities

# 1.4 Career Support



<p><b>T</b> targetjobs 06/03/2023 Hi Xin, your latest update fro... [EXTERNAL EMAIL] Xin, browse the latest job picks fo...</p>	<p><b>T</b> targetjobs 6 Mar 2023 To You</p>
<p><b>T</b> targetjobs 05/03/2023 Hi Xin, your latest update fro... [EXTERNAL EMAIL] Xin, browse the latest job picks fo...</p>	<p>[EXTERNAL EMAIL]</p>
<p><b>T</b> targetjobs 04/03/2023 Hi Xin, your latest update fro... [EXTERNAL EMAIL] Xin, browse the latest job picks fo...</p>	<p></p> <p><b>Xin, browse the latest job picks for you</b></p>
<p><b>T</b> targetjobs 03/03/2023 Join a Tax Graduate Program... [EXTERNAL EMAIL] Bring your ambition to a KPMG Tax Grad...</p>	<p> Bristol training contract RPC • <a href="#">Follow</a></p> <hr/> <p><b>NEXT</b> Trainee Merchandiser Next • <a href="#">Follow</a></p>





Part 2

## Daily Life



## 2.1 Colleges-MCR



## 2.2 Durham



**Thanks**

Betty Tong

---





# Any questions?

You can use the  
“Chat” box to ask  
any questions



# For more information following this session:

- **Contact me via email:**  
[vsevolod.ostapenko@durham.ac.uk](mailto:vsevolod.ostapenko@durham.ac.uk)
- **Visit our 'Ask Us' page**  
to search our FAQs or to ask a question
- **Visit the Applicant Portal (if you have already applied)**  
to submit your questions to our Admissions Team
- **Sign up to our next Masters Online Information Session:**  
chat online with staff from across the Business School and University to ask all your questions about Durham

Thank you for listening!

