Integrated Programme Assessment

21st November 2017 9.30-16.30

Supported by HEA

Brunel University London invites you to a free 1-day workshop to find out more Integrated Programme Assessment (IPA). The aim of the day is for participants to understand the opportunities presented by IPA and explore how this approach can be adapted and adopted to a range of institutional contexts.

Programme

09.30	Registration and coffee
10.00	***Welcome***
10.10	***Introduction to IPA: the Brunel approach*** An overview of IPA and how it is used in Biosciences at Brunel
10.40	***Why won't it work for you?*** Discussion of perceived barriers and possible solutions
11.10	***Graduate-ness: what does this look like in your subject?*** Identification of the skills required
	Coffee
11.45	***Assessment 1: How do we assess graduate skills?*** Exploring assessment methods; Authentic and sustainable assessments
12.45	Lunch
13.30	***Assessment 2: Synoptic assessment in practice*** Examples of synoptic assessments used at Brunel
14.15	***Stakeholder perspectives*** Comments from a range of stakeholders, including students.
14.45	***Building a successful team*** Discussion of who can contribute what
	Coffee
15.15	***Institutional context*** Develop plan for how IPA can be adapted/adopted to your institution
16.15	***Next steps and summary***
16.30	END

http://www.brunel.ac.uk/about/education-innovation

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Integrated Programme Assessment (IPA):

Brunel Workshop

Mariann Rand-Weaver

Pro-Vice Chancellor (Quality Assurance and Enhancement)

Amanda Harvey

Division Lead (Biosciences)

David Tree

Departmental Director for Teaching and Learning (Life Sciences)

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Introduction to IPA: the Brunel approach

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Integrated Programme Assessment (IPA):

Reduced Assessment and Better Graduates

CATE WINNERS 2016

HE sector context

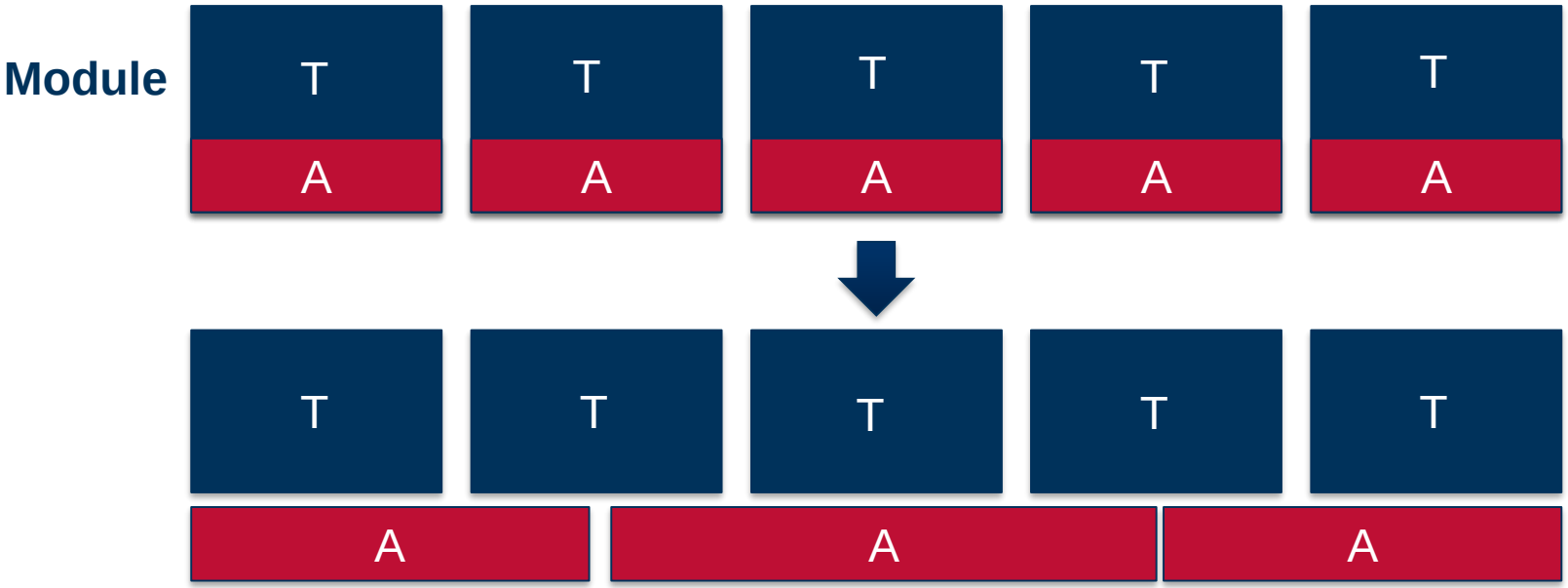
UK/international interest in IPA driven by:

- **concerns about over-assessment**
- **need for authentic assessments**
- **"*we test what is easy to test…..*"**
- **standards based assessment**
- **sustainable assessment**

Learning Outcomes –

transparency of how students demonstrate achievement

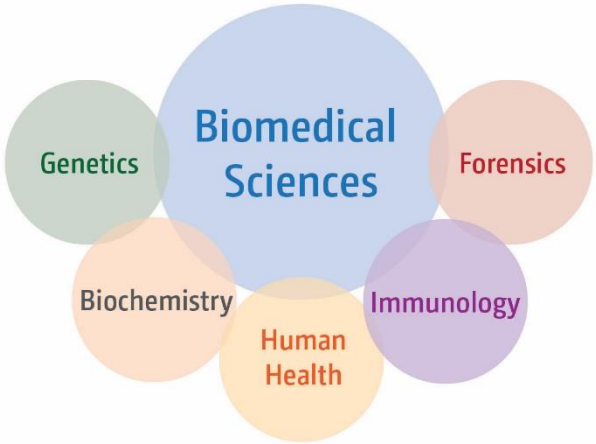
Integrated Programme Assessment (IPA): teaching and assessment uncoupled



Separating study and assessment reflects real life – we integrate information from many sources to solve a problem

Drivers for change (2010)

- **Heavy assessment burden**
  - Increased student numbers
  - Many low-credit pieces of assessment



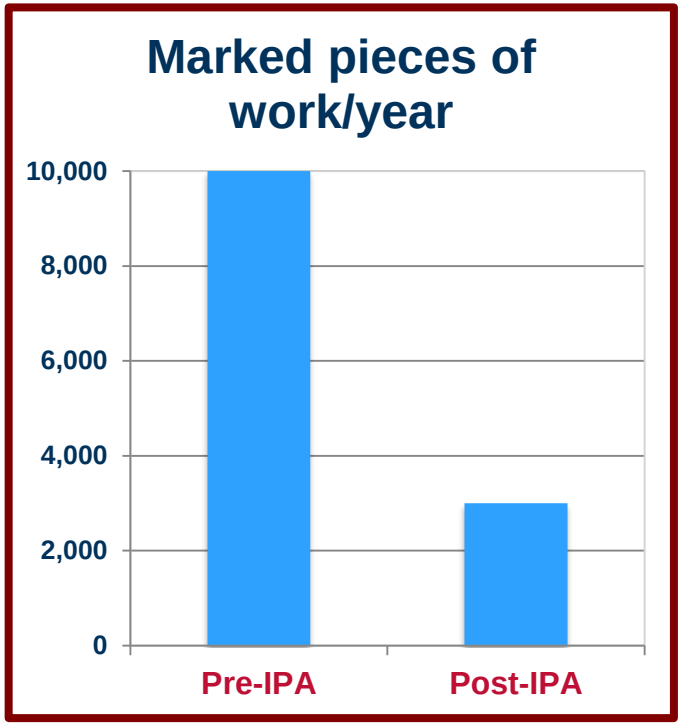
- **Improve graduate attributes**
  - Application of knowledge
  - Develop range of skills

- ***In silo* learning**

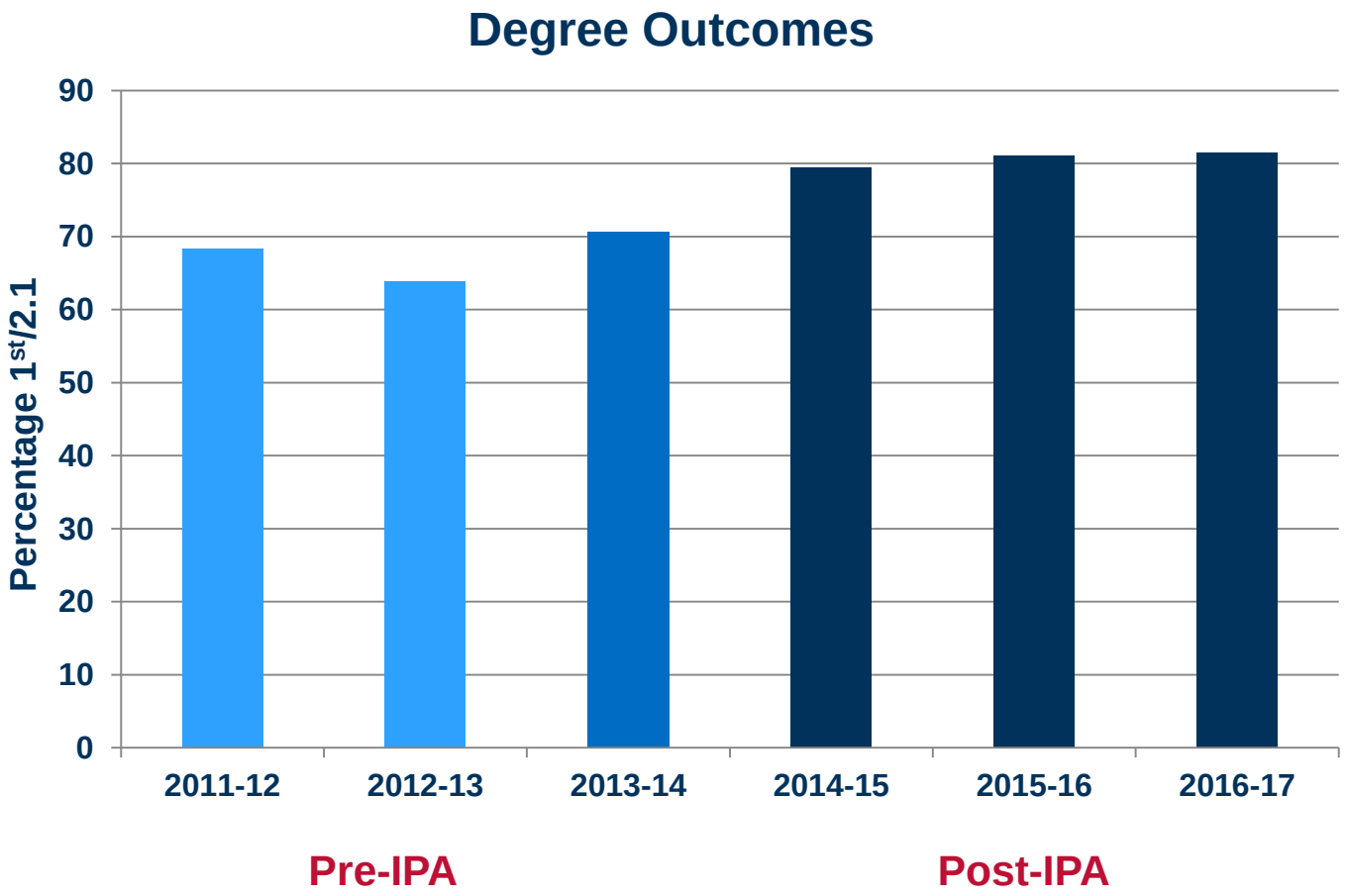
Senate Regulations (2009)
-
uncoupled
teaching and assessment

What we achieved

- Reduced summative assessment burden by 2/3
- Designed meaningful assessments that develop:
  - critical and analytical thinking
  - application of knowledge
  - independent and reflective learning
- Give all students the same learning/development opportunities
- Improved student experience and outcomes

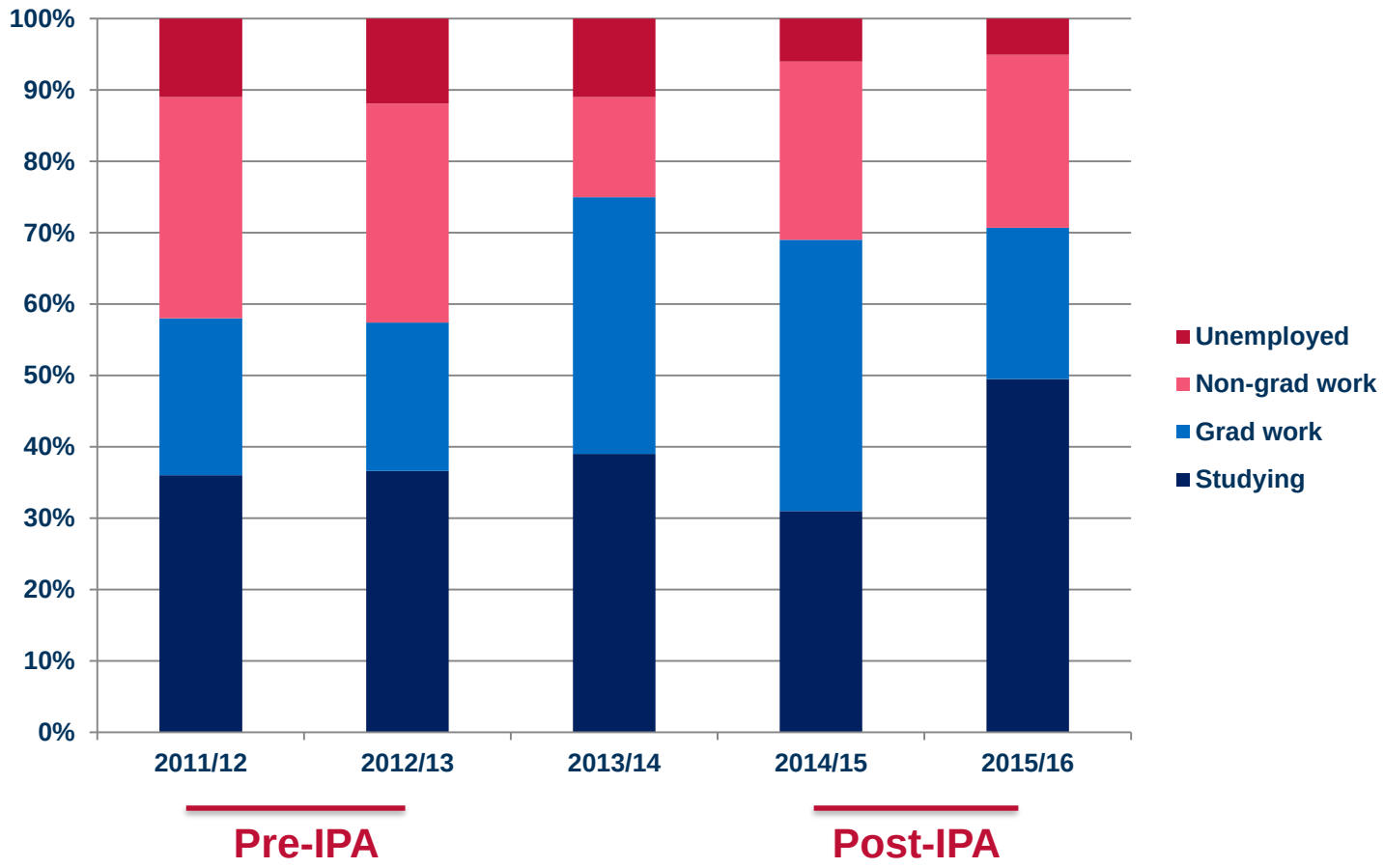


Student Awards Data



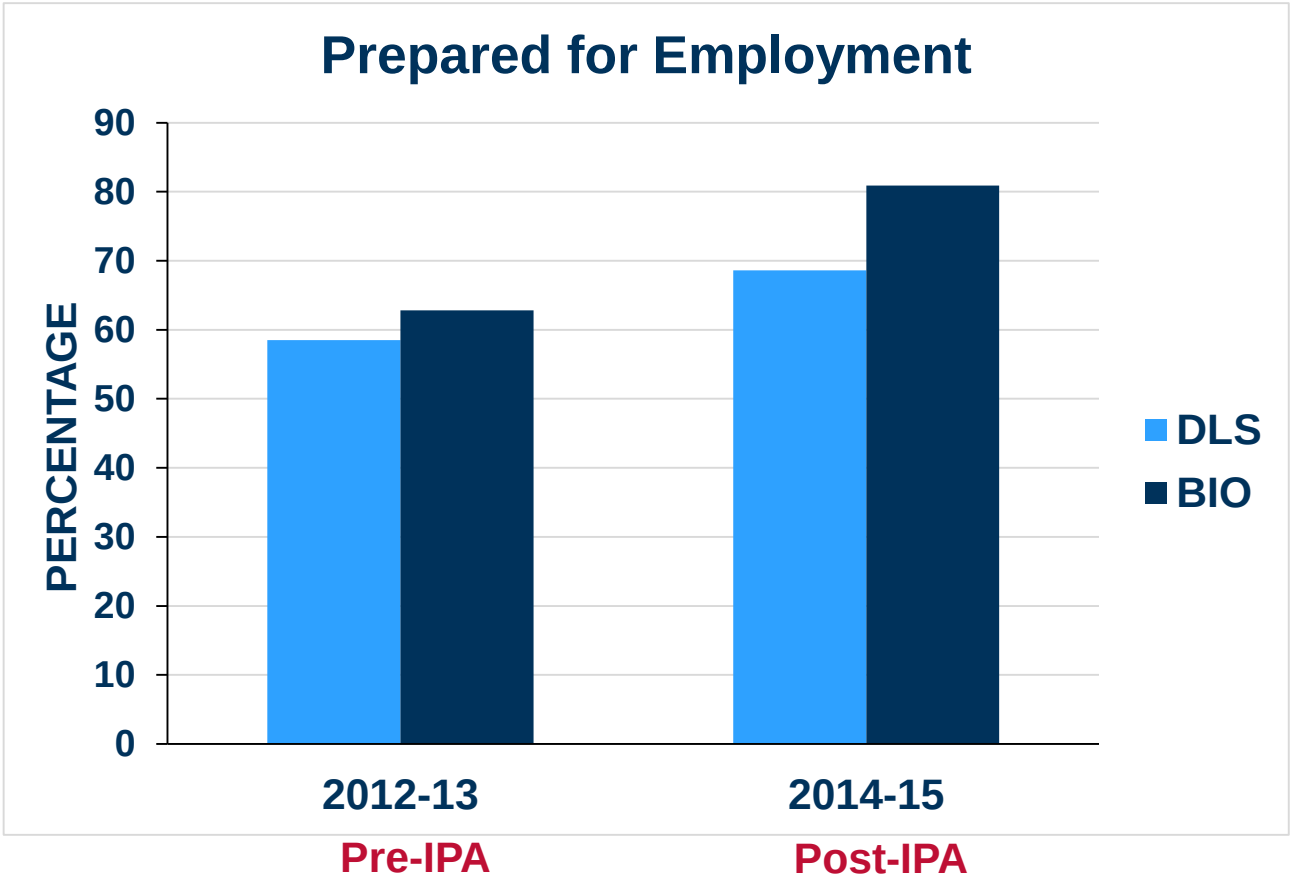
Degree outcomes have improved using the **synoptic** approach compared to the **modular** programme.

Graduate Level Outcomes



Positive graduate level outcomes increased; **negative** outcomes decreased

Students feel better prepared for employment



Biomedical Sciences graduates feel better prepared for employment than **Department of Life Sciences** graduates

NSS – Assessment and Feedback

	2013	2015	
Biosciences	73%	79%	+6%
Brunel	72%	71%	-1%
Sector	74%	76%	+2%

Pre-IPA Post-IPA

National subject ranking increased from 28th to 8th

Senate Regulation changes

From:

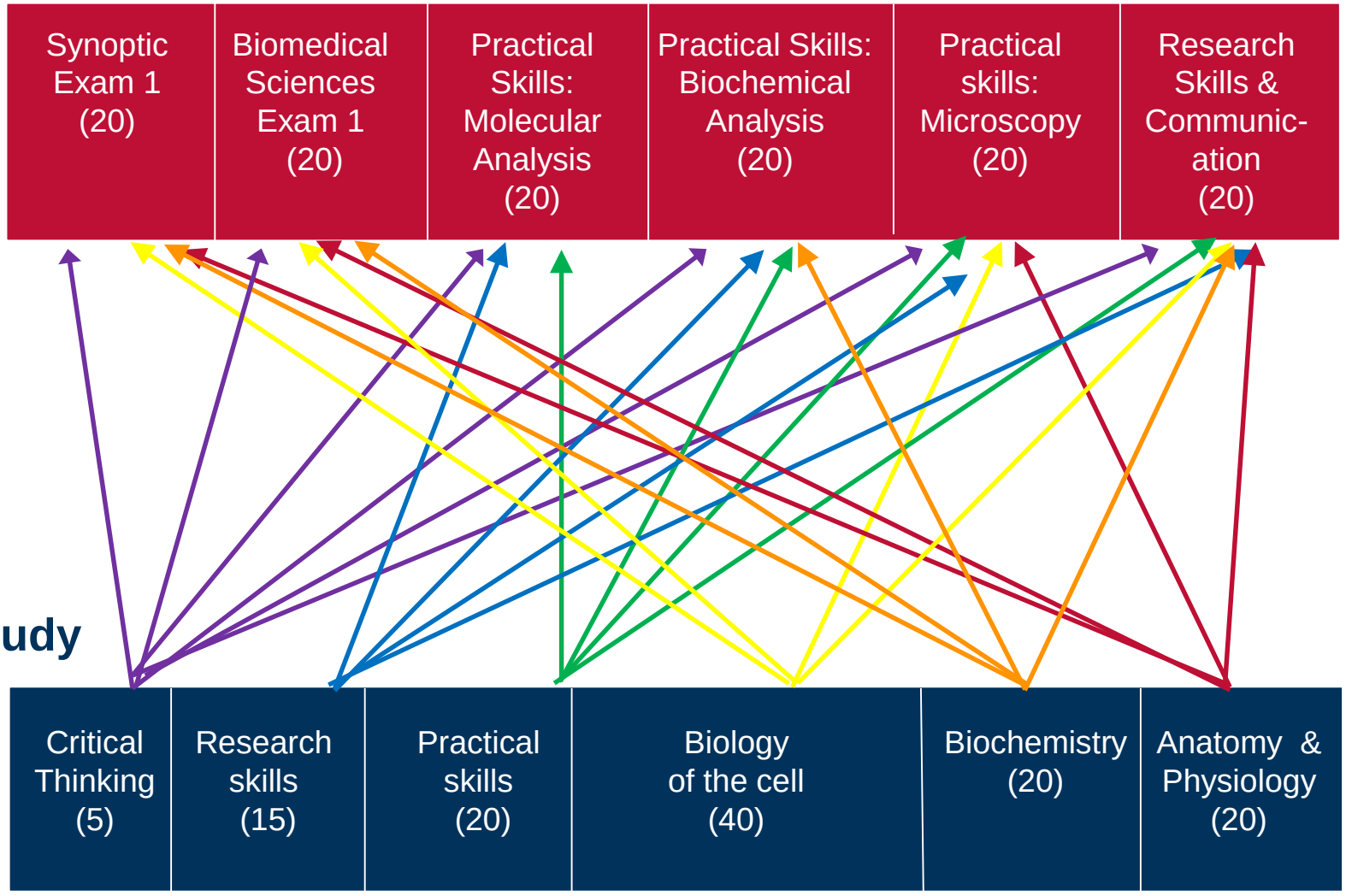
... must normally undertake modules to a value of at least 120 credits at each level…

To:

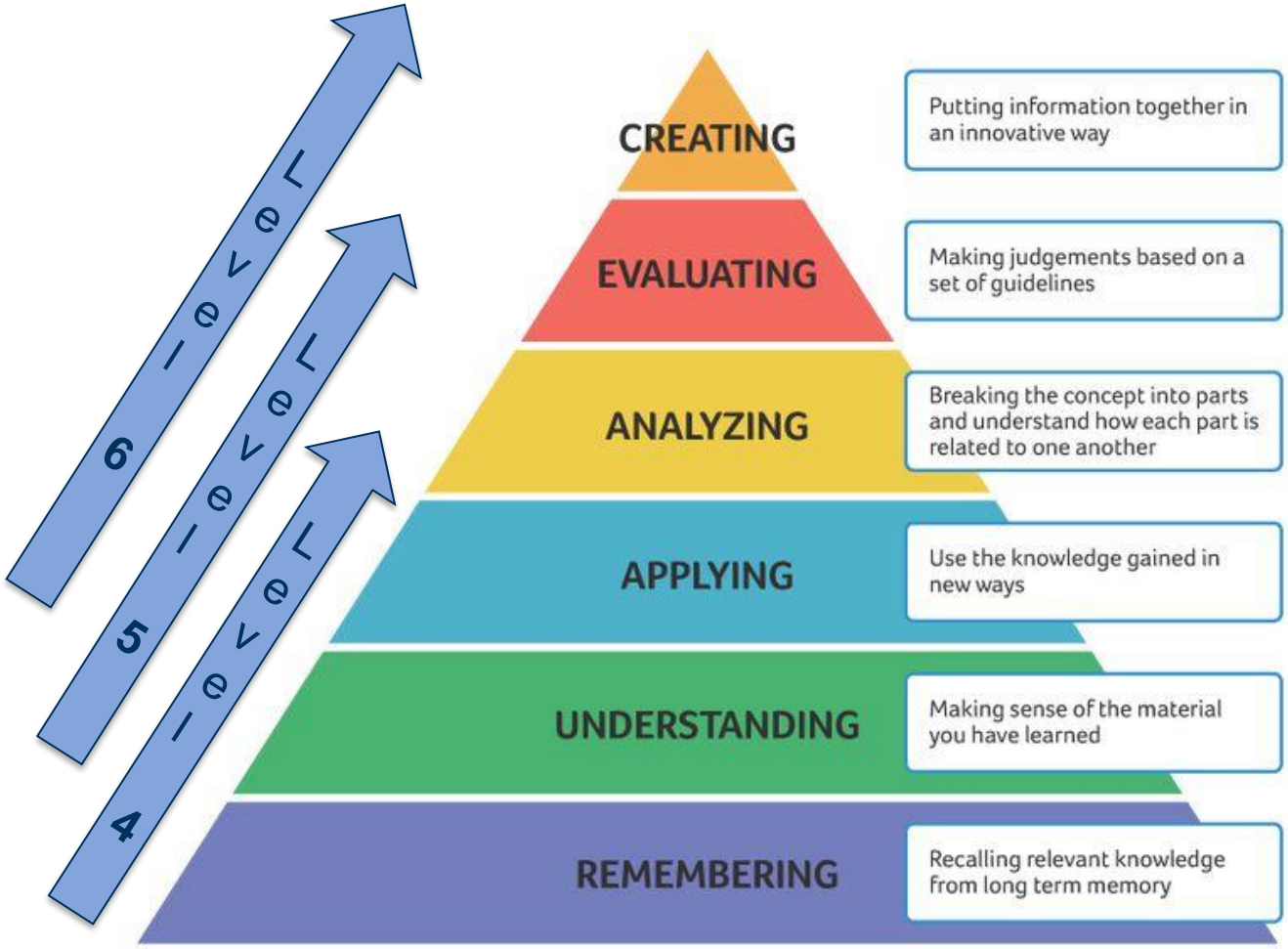
…A normal period if study will be approved for each programme…Each year of full-time study shall normally be equivalent to 120 credits of assessment…

IPA - Level 4

Assessment



Assessment follows Bloom's taxonomy



Benefits

Staff

- Assessment burden is reduced
- Marking is shared
- Teaching has become a ‘community property’

Students

- Fewer more interesting assessments
- Formative activities supports learning
- Recognise graduate attributes

- Better students outcomes
- Better preparation for employment
- Increased student satisfaction
- Highlighted as good practice by professional bodies

IPA in five easy steps

1. What is the purpose of the programme – who is it for? ***Aim***

2. What do we want graduates to know; be able to do; skills/competencies? ***Learning Outcomes***

3. What assessments are needed/appropriate to demonstrate learning outcomes are met? ***Assessment Strategy***

4. How are students best supported to be successful in assessments? ***Teaching Strategy***

5. What content needs to be covered, in what sequence, by whom, etc. ***Delivery***

Why won't it work for you?

Why won't it work for you?

Task

- Discuss in groups the barriers that you think might prevent this from working in your institution
- What might the solutions be?
- Write them down on post-its
- Attach to sheets on the wall

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Graduate-ness: what does this look like in your subject?

Graduate-ness: what does this look like in your subject?

Task

- Identify the skills required for graduates in your subject areas
- Note these on flip chart paper
- Develop into programme-level learning outcomes

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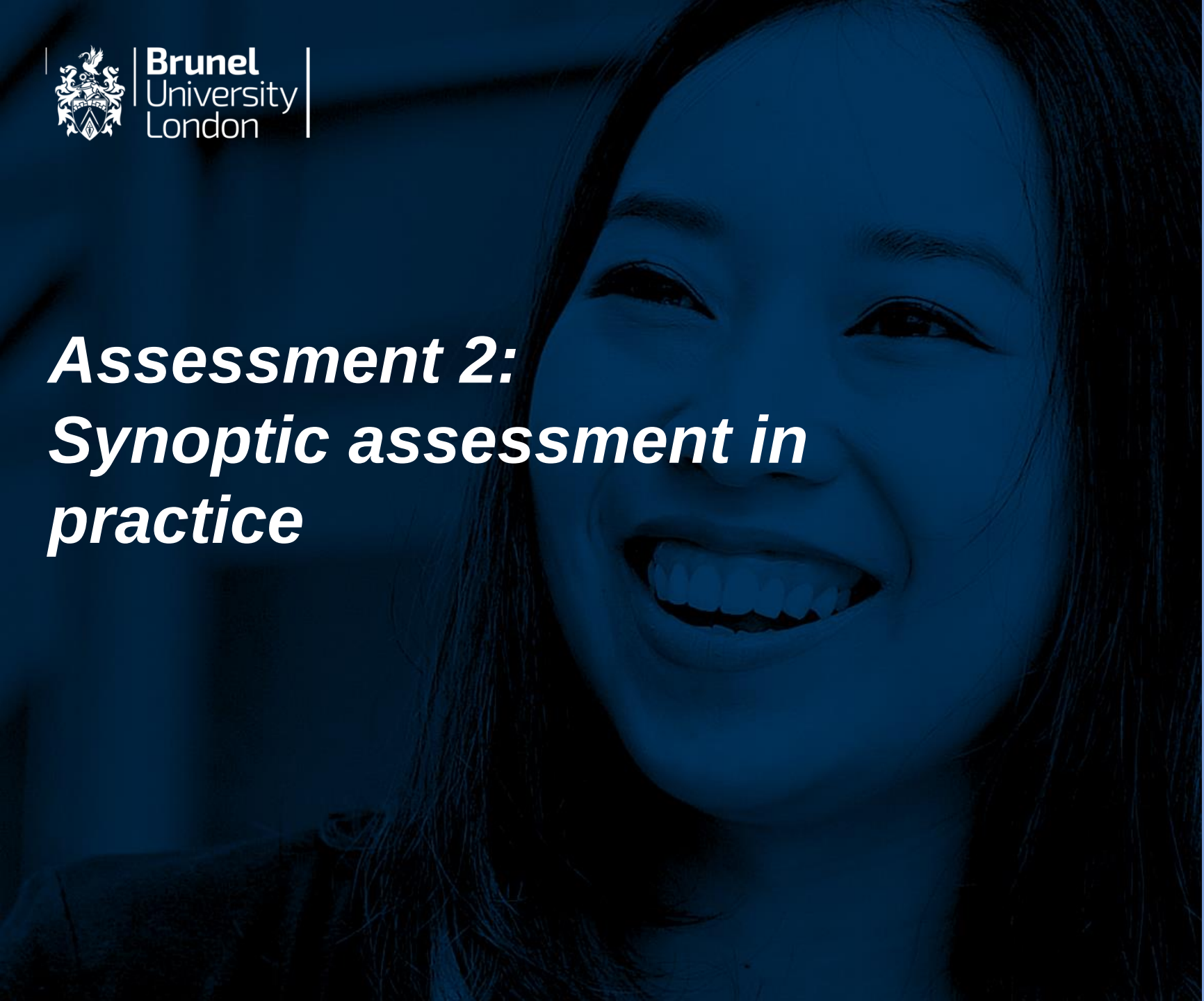
Assessment 1: How do we assess graduate skills?

Assessment 1: How do we assess graduate skills?

Task

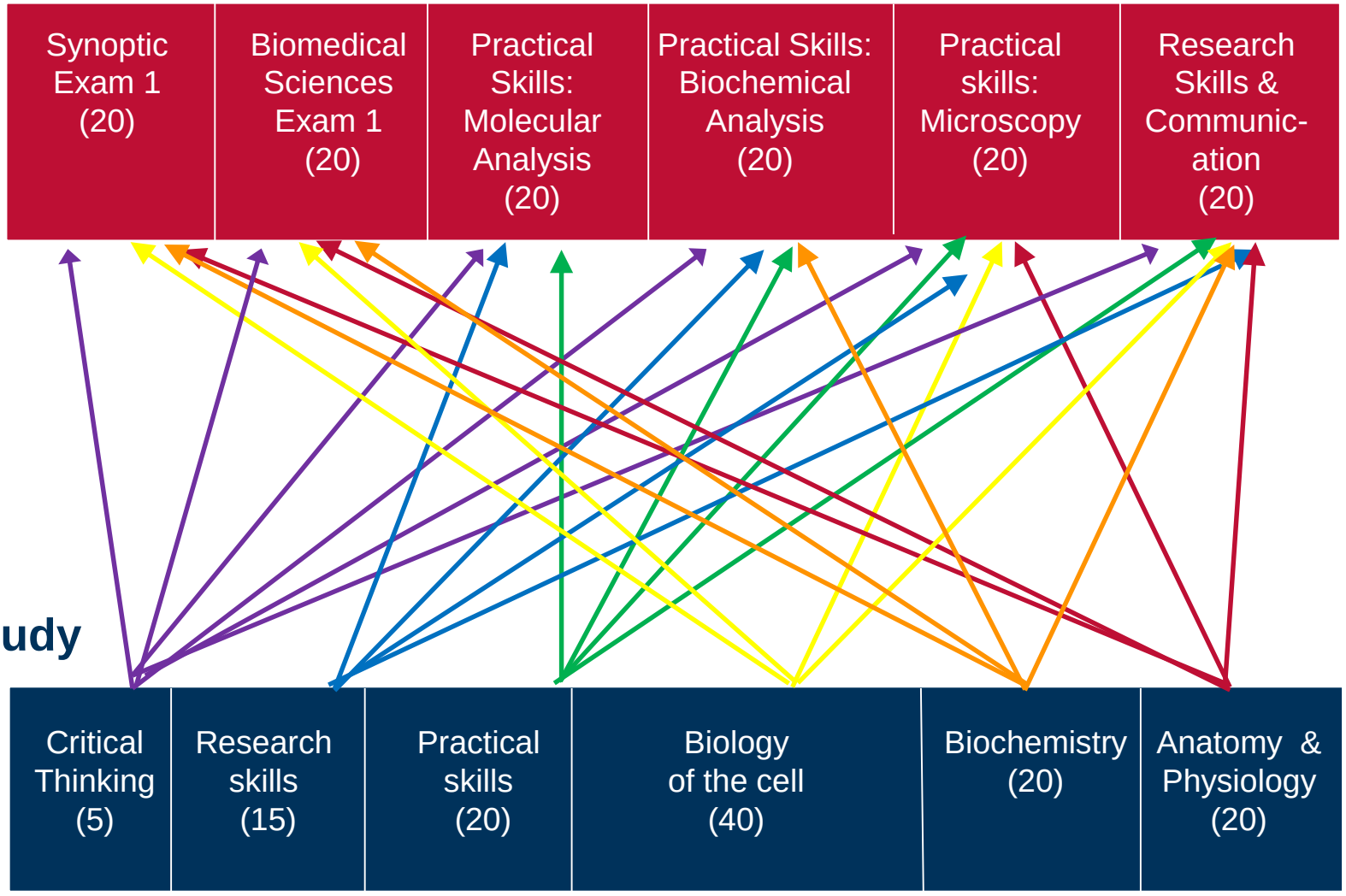
- Design an assessment that tests some of learning outcomes defined earlier
- Is this an authentic assessment?
- Write on flip-chart paper



Assessment 2: Synoptic assessment in practice

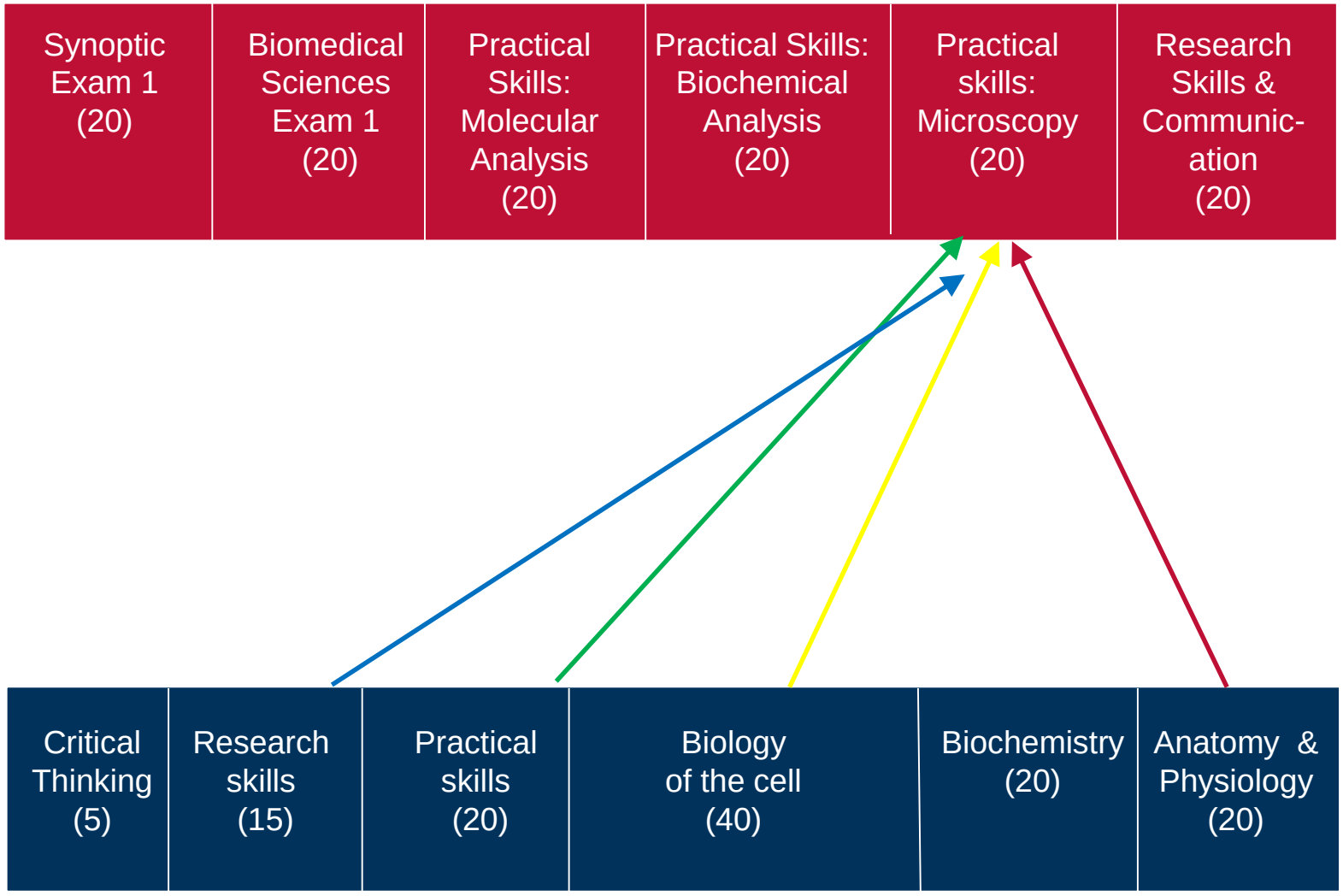
IPA - Level 4

Assessment



IPA - Level 4

Assessment



Practical Skills: Microscopy

From Study Blocks:

- *Anatomy and Physiology:*
  Function and histology of the human digestive tract
- *Biology of the Cell:*
  Differentiation of different and potentially pathogenic bacteria
- *Practical Skills:*
  Enumeration of cells with a counting chamber and a microscope
- *Research Skills:*

  Using a microscope safely and correctly

Practical Skills: Microscopy

The students are faced with the clinical scenario of a patient suffering from abdominal pain.

- Abdominal pain could be caused by

  A) histological (structural) changes

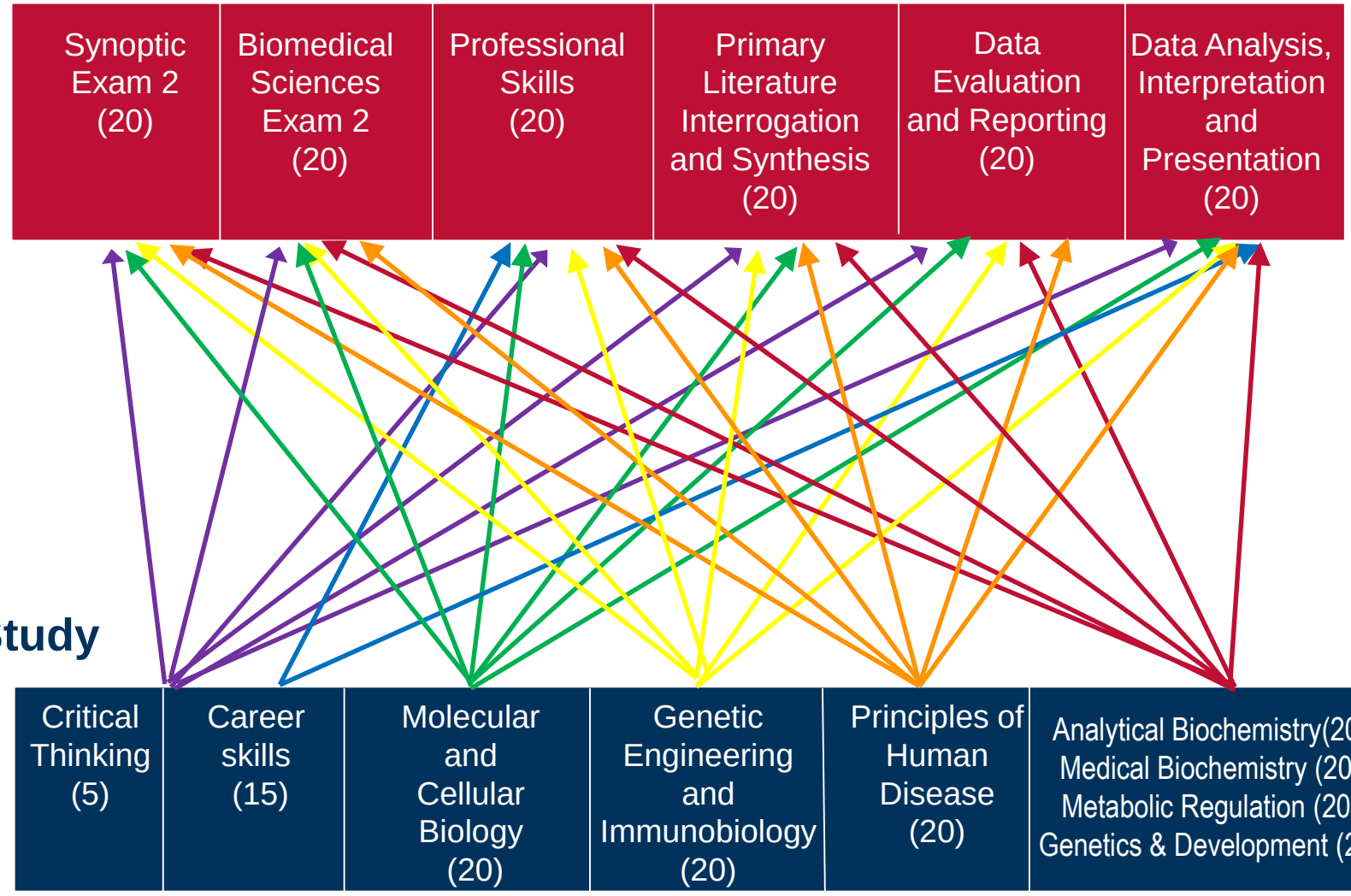
  B) an unusually high number of bacteria normally present in the gut, or

  C) by a bacterial or fungal species not normally present in the gut.

- Students have to assess histology images of the digestive tract as well as routine microbiology procedures such as Gram staining and microbiological enumeration techniques in order to establish what might be the cause of problems for a patient

IPA - Level 5

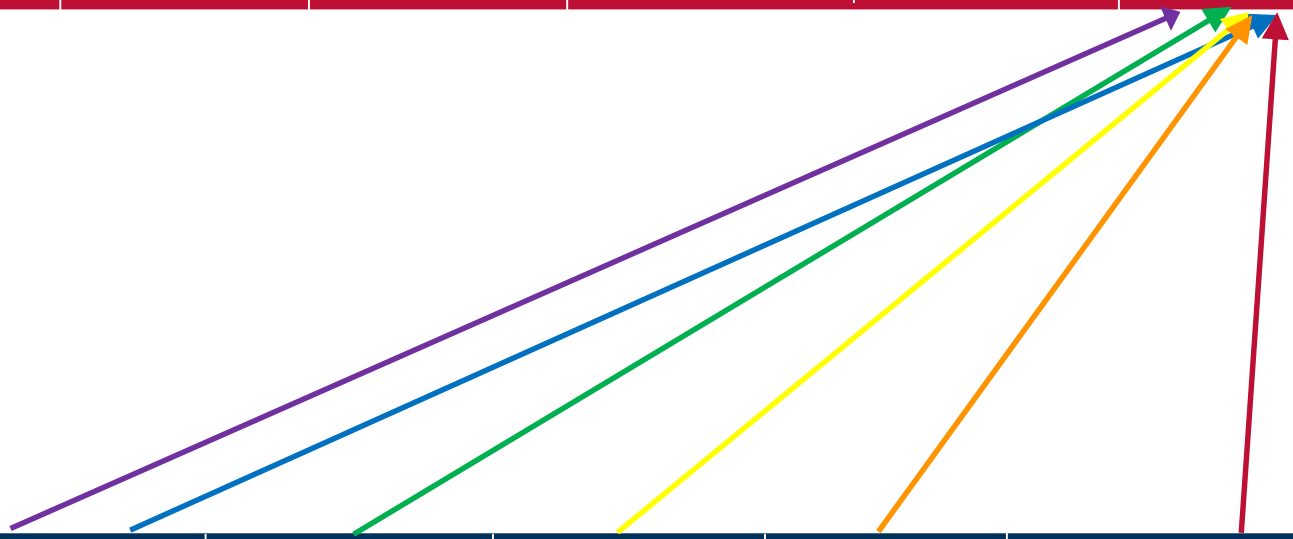
Assessment



IPA - Level 5

Assessment

Synoptic Exam 2 (20)	Biomedical Sciences Exam 2 (20)	Professional Skills (20)	Primary Literature Interrogation and Synthesis (20)	Data Evaluation and Reporting (20)	Data Analysis, Interpretation and Presentation (20)



Study

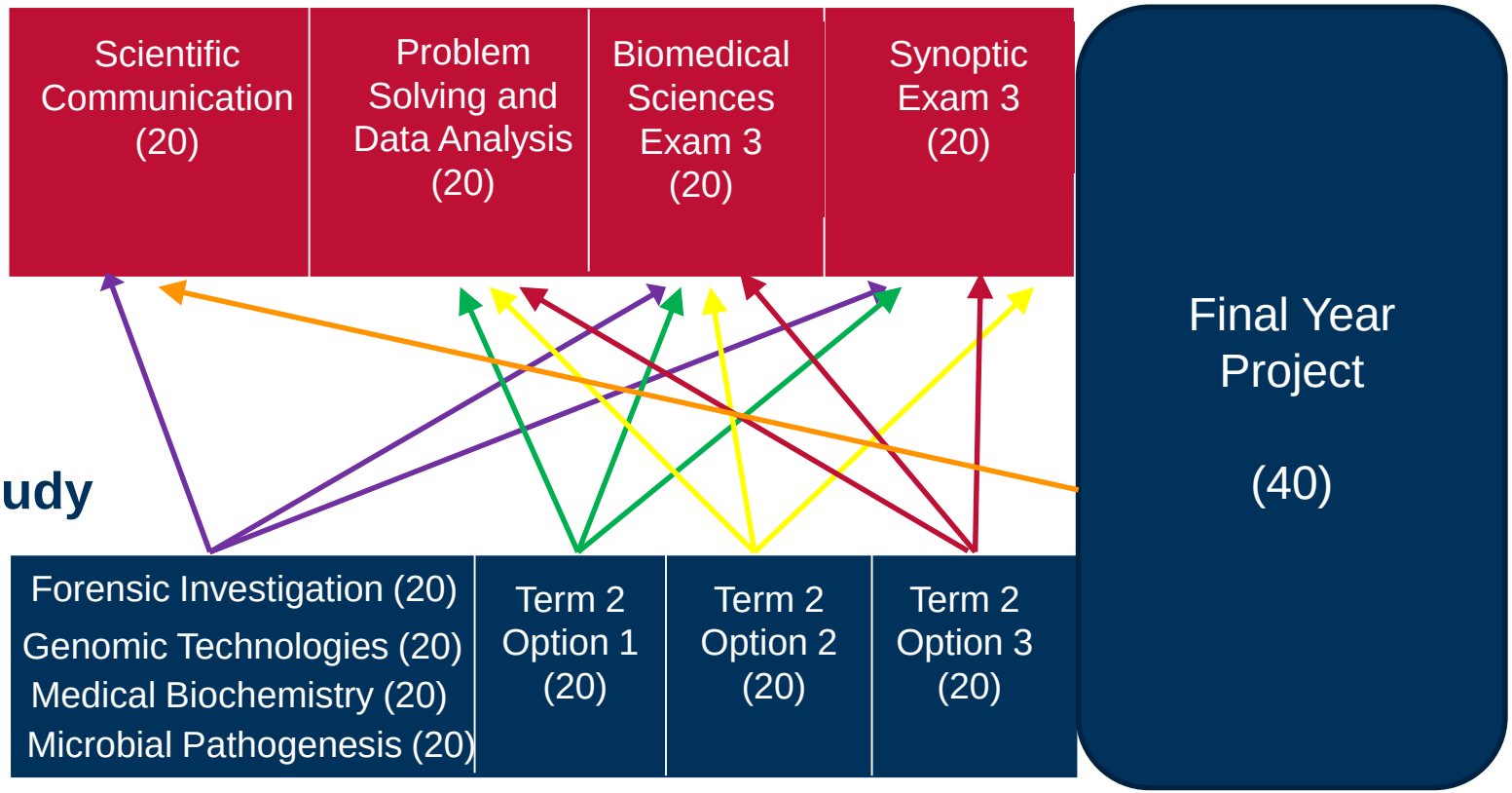
Critical Thinking (5)	Career skills (15)	Molecular and Cellular Biology (20)	Genetic Engineering and Immunobiology (20)	Principles of Human Disease (20)	Analytical Biochemistry(20) Medical Biochemistry (20) Metabolic Regulation (20) Genetics & Development (20)

Data Analysis, Interpretation and Presentation

- Poster presentation based on case study
- Students are given raw data (similar to that generated in laboratory practical experiments):
  - Histology Sections (exfoliative smears, liver biopsy)
  - ELISA data
  - CD4 T cell counts
  - Liver enzyme assays
- Data is analysed and formatted for presentation
- Concludes with likely prognosis and possible treatments
- Presented at the *Brunel Symposium on Opportunistic Infections in Diseases of the Immune System*

IPA - Level 6

Assessment



IPA - Level 6

Assessment

Scientific Communication (20)	Problem Solving and Data Analysis (20)	Biomedical Sciences Exam 3 (20)	Synoptic Exam 3 (20)

Final Year Project

(40)

Study

Forensic Investigation (20) Genomic Technologies (20) Medical Biochemistry (20) Microbial Pathogenesis (20)	Term 2 Option 1 (20)	Term 2 Option 2 (20)	Term 2 Option 3 (20)

Problem Solving and Data Analysis Coursework

- Portfolio of work from three options (chosen from six)
- Different options do different work BUT they all involve solving problems by analysing data
- Fulfil the same learning outcomes

Synoptic Exam

- A seen exam - question released 7 days in advance
- At every level, increasing in difficulty and complexity
- Expectation that students will:
  - integrate knowledge and information from across the degree and wider subject area
  - show engagement with, and critical understanding of, the primary academic literature
  - demonstrate understanding of relevant ethical issues

Skills Based Assessments

Skills	Level 4	Level5	Level6
Knowledge		Increasing in difficulty and complexity	

Communication

Data analysis

Professional development

Skills Based Assessments

Skills	Level 4	Level5	Level6
Knowledge	Unseen subject-specific and seen synoptic exam		
Communication	1 Simple poster and PPT presentations 2 Brief reports	1 Conference-style poster presentation 2 Paper manuscript	1 PPT presentation on FYP 2 Dense report
Data analysis	1 Computer based assessment 2 Practical reports	1 Critical analysis of literature 2 Data evaluation and interpretation	1 Final year project dissertation 2 Problem solving reports
Professional development	Portfolio of personal reflections	Portfolio of career related activities	Final year project dissertation

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Stakeholder perspectives

Student Feedback

"*I have to deliver presentations, communicate with clients at face to face meetings, deliver training - all of which require good oral presentation skills and some degree of confidence.*

Posters and presentations are great practice for that, in addition to being good practice at presenting information visually in an easy to read and attractive manner.

Talks and the 'conference style' poster presentations were also really good for developing networking skills, something that's come in really handy being in a client-facing position"

- (2015 Graduate)

PSRB and Design Panel Comments

- At Accreditation events PSRBs have identified the use of study and assessment blocks as an example of good practice.

  - Royal Society of Biology Accreditation Dec 2014

- At re-approval events, this structure has been commended for its flexibility:

"*the Panel commended a very well thought out and re-designed programme with clear documentation which made excellent use of the new freedom of the programme*".

- Re-approval BSc OT January 2012

External Examiners

External Examiners confirm:

“the methodology of separating assessment blocks from teaching blocks, should increase the abilities of students to synthesise material and develop critical thinking and should be commended”.

“[the synoptic approach allows] *students scope to bring together material in such a way that must enhance their overall understanding”.*

Staff Comments

“My initial reservation with the programme-level learning and assessment strategy for The Division of Biosciences centred on the introduction of non-assessed exercises within the curriculum. For example a number of laboratory assessment were not directly assessed with a formal “linked” assessment.

However, having seen the strategy operate for a few academic cycles, I am convinced that a programme (rather than modular) level assessment strategy is advantageous because it prevents a silo approach to learning and encourages students to take a wider view in their learning strategies. It also permits a wider use of synoptic assessments which allows a more effective assessment of student knowledge and skills and allows constructive alignment of learning and assessment”

- Former Staff Member

Building a successful team

Building a successful team

Who is needed?

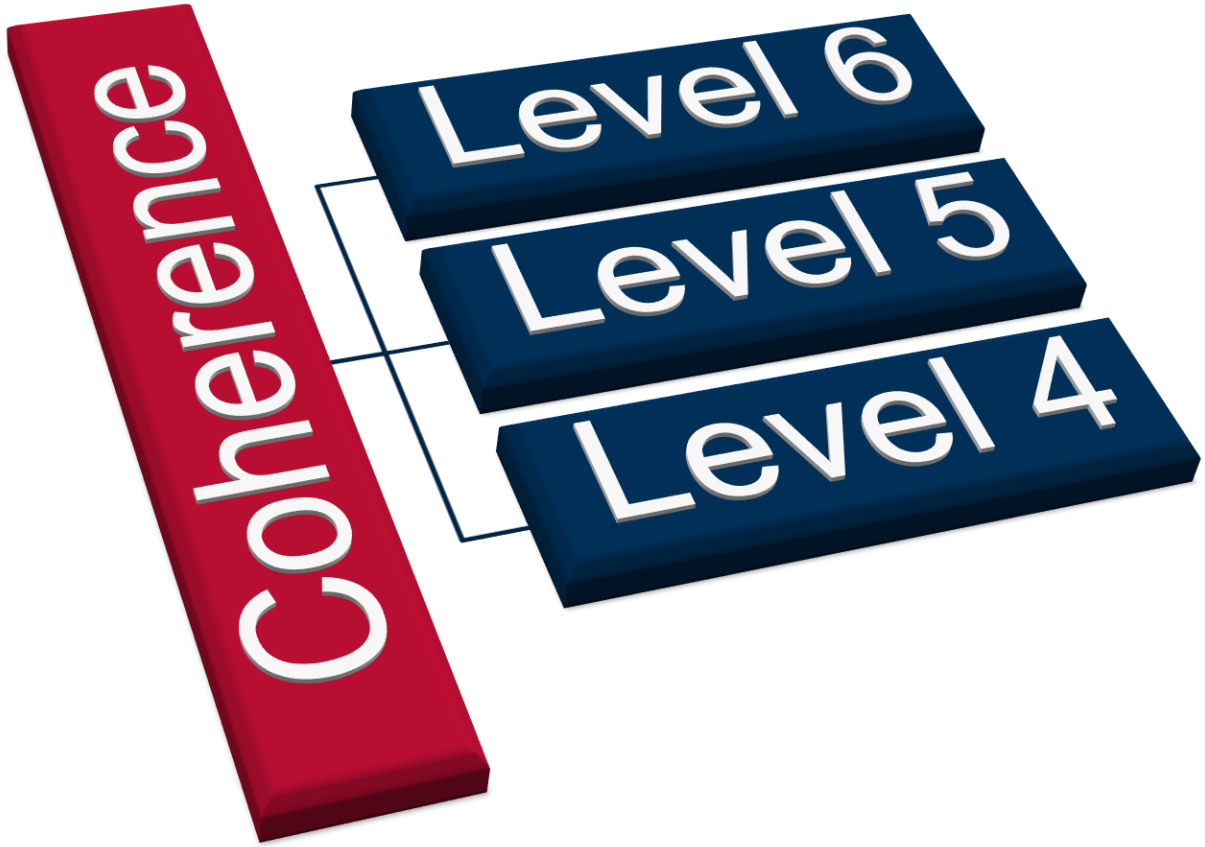
- Students
- Staff
- Expert in Programme Design

Recognised Programme Developers

RPDs

- Staff with practical experience in programme design
- Have undergone training
- Required to be on a design team to support development
- Chair programme approval events
- Highlighted by QAA as an aspect of good practice

Coherence within and between levels



Institutional context

Institutional context

Task

- Consider how you could make IPA work for you.
  - What needs to happen?
  - What can be done already?
  - What steps do you need to take?

Next steps and summary

Requirements for IPA

1. Regulations that accommodate separation of teaching/study and assessment

2. Collegial and team/based approach

3. Vision of what is to be achieved

4. Plan everything (coordinators/marking/moderation)

IPA in five easy steps

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5. What content needs to be covered, in what sequence, by whom, etc. ***Delivery***

Feedback from today

- Will be sought via e-mail
- Will request permission to contact you in 12 months time to ask about progress
- Long term study for HEA CATE Award

THANK YOU!