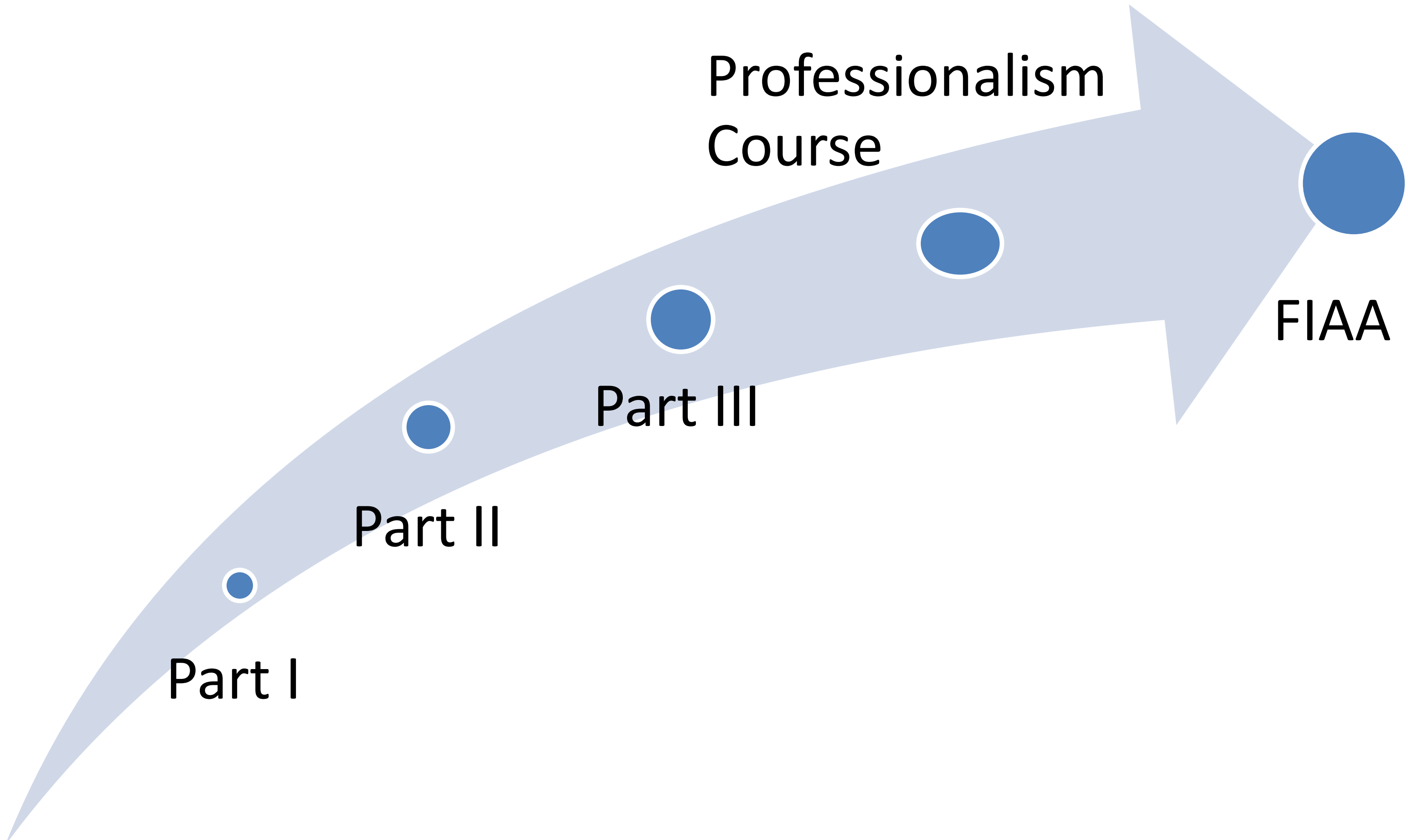
# Part II Actuarial Exams

An Introduction

# Context: Path to Fellowship



# Part II is a bridging course

**Part I:**

- Well-defined environment;
- 'Maths' based;
- Specific technical skills;
- Exams  - 6 to 9 questions.

**Part III:**

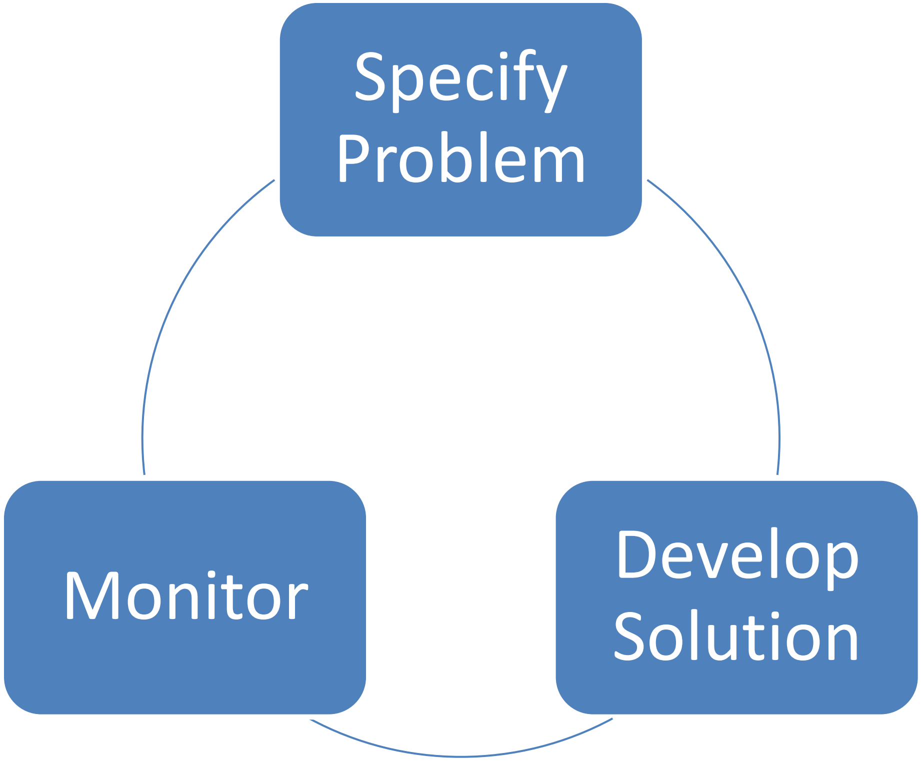
- 'Real world' environment;
- Application of skills;
- Student determines relevant skills;
- Exams – 2 questions at specialist level.

# How does Part II fit into path to Fellowship?

- Part II is not a hard Part 1 exam.
- It is the easiest Part III exam.
- Introduces common elements of Part III:
  - essay-style exams;
  - unfamiliar context – application of bookwork & often not repetition of bookwork;
  - problem solving method - “control cycle”;
  - consideration of other views.

# Control Cycle Framework (ETC 4110 & ETC 4120)

External Environment




Professionalism

# Maths in Part II

- Some in Investments (ETC 4130)
  - assume knowledge of Part I.
- Limited maths in Control Cycle (ETC 4110, 4120):
  - PV premiums = PV benefits + PV expense + profit measure;
  - Asset = Liability + Capital;
  - Profit = income less outgo less increase in reserve.

# Quantitative v Qualitative

'Part I'

- Go from A to B
- List assumptions/ axioms
  - Develop theory
  - Deep insight into a model
  - Provide an answer in framework
- Change assumption
  - New, more complicated model
  - Still solvable ( at this level)

Part II – akin to Arts

- Stakeholders disagree on assumptions
  - Can't agree on where A is
  - Many paths to B
  - Multiple answers to B
  - Answer is often a list of further questions
- An actuary's job is to recognise differences and report on viable options (in appropriate context).

# Example of $4^{th}/5^{th}$ year Assignment

- Will open up an 8 page pdf covering $2^{nd}$ assignment for ETC 4460/5460 Financial Econometrics. Assignment is 20% of total
- Note:
  - data provided;
  - models provided;
  - multiple parts to each question;
  - significant amount of guidance on how to solve the questions;
  - very deep knowledge of particular advanced models.

# Example of ACC Assignment

- You are an FIAA in  a large Australian consultancy firm. A CEO of a proposed new insurance company in a foreign country has requested you report on items necessary to consider on the topic of variable annuities.
- Citizens in that country save exactly 25% of their salary.
- All proceeds are used for their retirement.
- The government a guaranteed minimum return of CPI.
- Prepare a 10 minute presentation on one section from your report.

# Observations on example ACC assignment

- Limited information.
- Write a report – to whom?
- Consider audience.
- Large question – no sub-parts.
- Open question.
- No right answer.
- Some basic research required (google).
- Not looking for depth – wide thoughts to generate many points.

# Core skills to practice as an Actuary: Actuarial Capability Framework

- Contribution to Business Strategy.
- Leadership.
- Holistic problem solving.
- Valuing uncertain cash flows.
- Risk management.
- Professional governance.
- Product development, management and pricing.
- Investment advice and governance.

# Example: Part II and ACF

- Contribute to business strategy:
  - understand context;
  - need for reassessment;
  - generation & assessment of ideas, strategy & modelling;
  - explanation, promotion and selling of the strategy to ensure implementation.
- Looking for a wide number of points. Technical detail in Part III.

# Suggested Study Pattern

- 2 hour lecture.
- 1 hour tutorial (exam style practice in class).
- 3 - 5 hours pre-reading:
  - attend class having read relevant chapter(s).
- 3 hours homework.
- 1.5 hours revision of last week’s homework.
- 1.5 hours wider material reading.

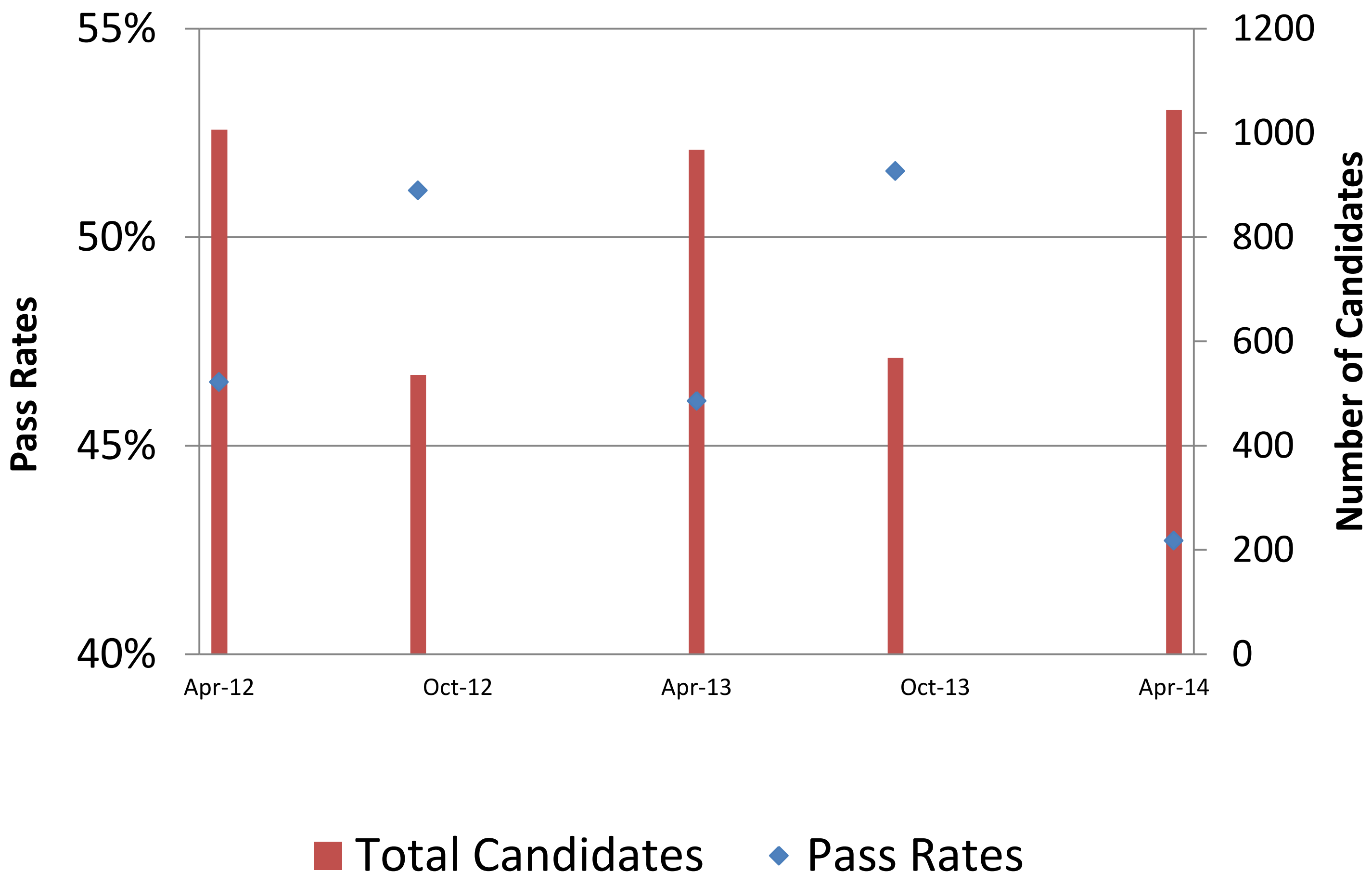
# Exemption Recommendation

- Exam results.
- Assignment marks.
- Participation in the class.
- Homework attempts.
- In-class tests.

# Part II Pass Rates (ie exemption rates)

- No prescribed percentage.
- External examiner reviews:
  - examinable material;
  - students' solutions;
  - reports in AI and reviewed by Council.
- No public data in Australia on Part II pass rates.
- Use CA1 UK exam as proxy.

# CA1 Pass Rates and Exposure



# Actuaries Institute view on Part III

- Greater responsibility for learning.
- Less structure to study.
- Imbalance of life roles (in full-time employment).
- Increased individual pressure.
- Less contact with others.
- Complex judgment.
- Mastery learning approach – requires deep learning.

# Australian Part III Pass Rates