UNIVERSITY OF LIMERICK
OLLSCOIL LUIMNIGH

CSIS
Department of Computer Science & Information Systems

Immersive Software Engineering [ISE]

Residencies Overview

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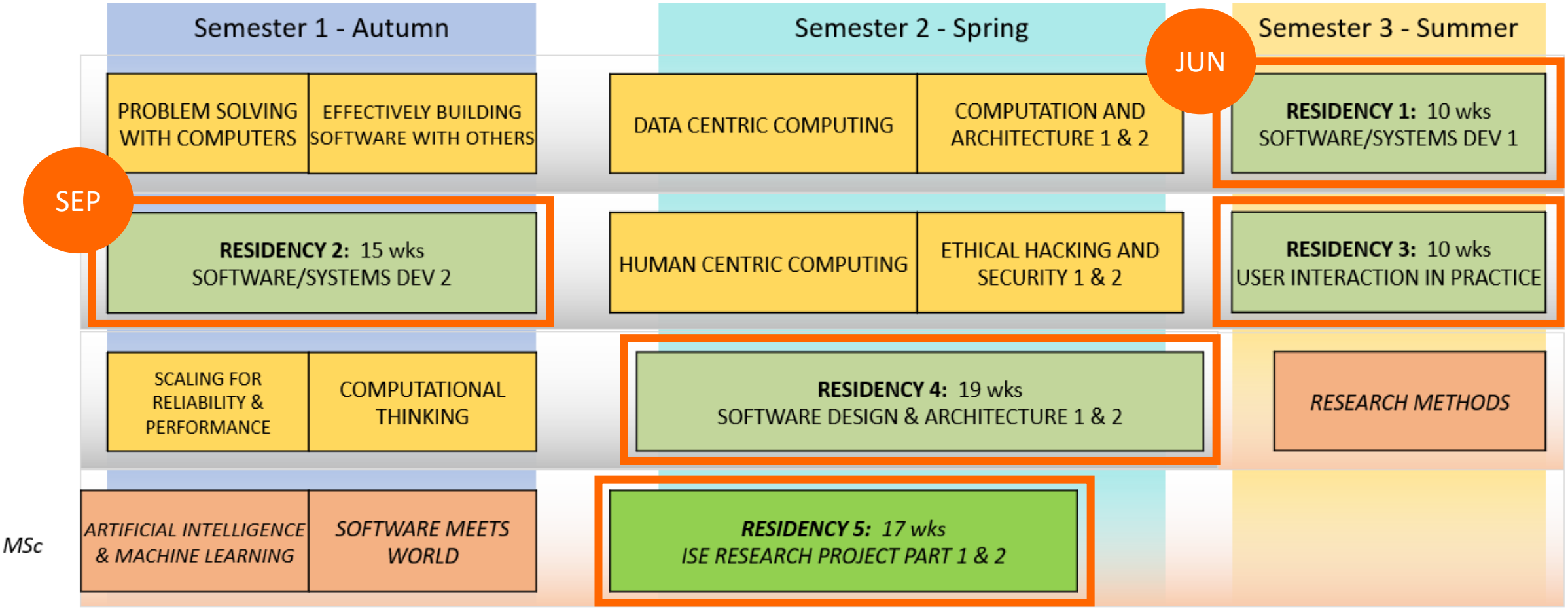
Residency Overview

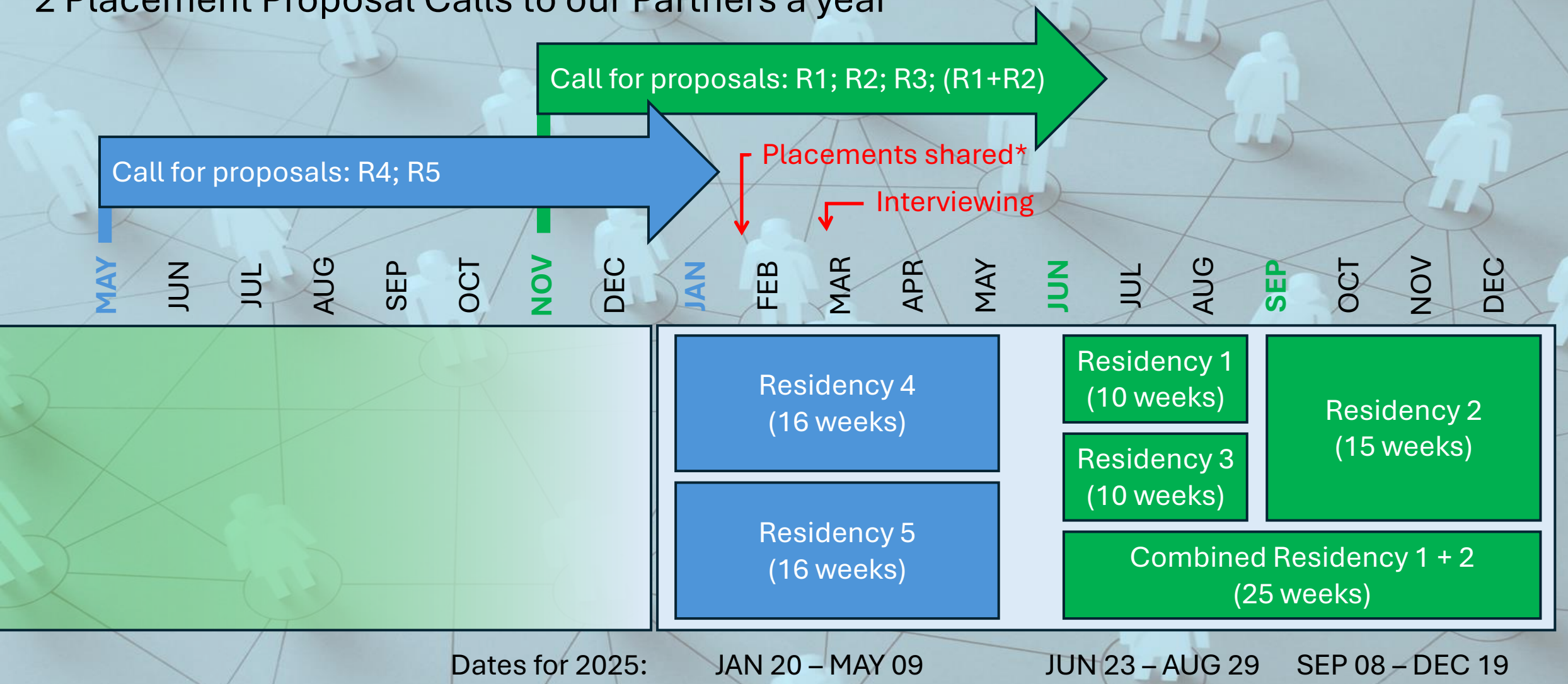
- Date & Durations
- Timelines
- Principles
- Matching
- Expected Skillset
- Learning Outcomes
- Grading Approach

Residency 1 & 2: Dates and durations



ISE Partner Involvement

2 Placement Proposal Calls to our Partners a year



Dates for 2025: JAN 20 – MAY 09 JUN 23 – AUG 29 SEP 08 – DEC 19

* Actual dates may vary as the financial year for our business partners does not match the academic calendar and generally starts in January, so this can affect HR planning timelines

Residency 1 & 2 Principles

Guiding Principles

1. Students rotate across different Residency Partners (RPs) for Residencies 1-4
2. Two students per residency per RP for Residencies 1-3 is the favoured allocation
3. Allocation/Matching is competitive: Students rank favourite RPs, are interviewed for acceptance

***NOTE**: For International students on an IRP Stamp 2, UL Global contacted Immigration and confirmed that the Stamp 2 permission will cover students for the residency elements of the programme as they are integral to it, so working hours limitations do not apply.*

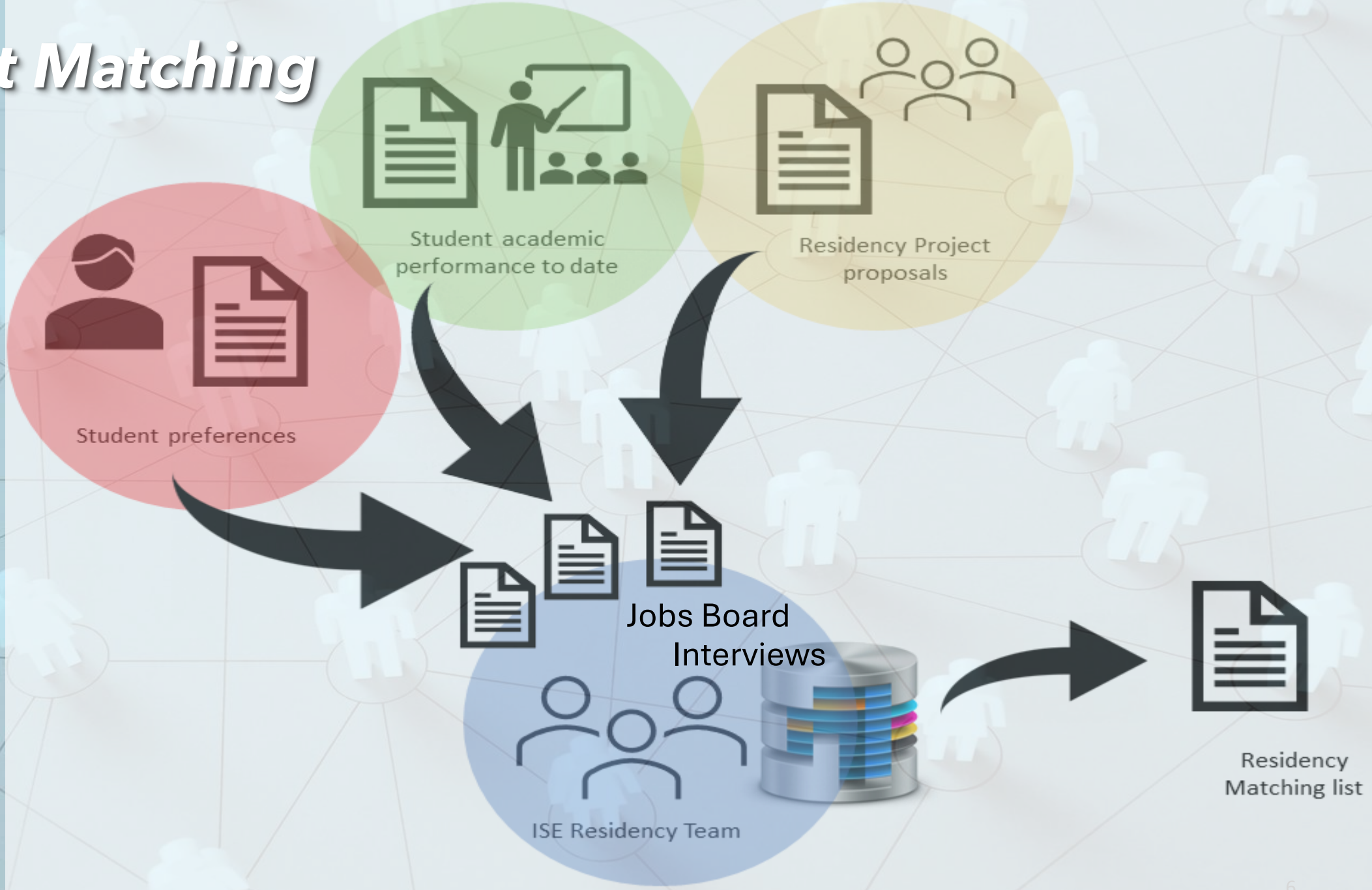
Residency Partner Roles

- **Residency Champion** - *Central point of contact for Residencies, coordinating projects, TLs, ISE comms.*
- **HR Representative** - *Focus on on-boarding, employee benefits, contracts, support.*
- **Executive Sponsor** - *Senior technical management, overseeing the Residencies and ensuring continuity of the ISE Champion and HR positions.*

One-off roles per Residency:

- **Team Lead/PM** - *Hosts Resident. Follows through on Learning Outcomes. Links in with Residency Champion*
- **Advisor**(optional) - *Early career professional to act as a peer/role-model to resident and be a point of contact*

Student Matching



Residency 1 & 2
Preparation

Good to know what the Residency Partners are expecting…

- We share the expected skillset after 1 year on ISE with them
- They have also seen the Learning Outcomes, **and have collaborated with us in Workshops as to how the assessment of each residency should be carried out and distributed across UL and the RPs**
- These Learning Outcomes are not specific tasks or prescribed technical exercises, but are more focused on abilities that should be learned and mastered in the process of taking part in high-functioning software development teams and they help the RPs write their proposals
- They are generic enough to be applicable across the broad range of company sizes, domains and skillsets we have within our ISE Partner membership

Residency 1 & 2

Student skillset by June 2025

This is what the Partners are expecting after 4 Blocks of learning… ☺

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CS4453 - RESIDENCY 1: SOFTWARE SYSTEMS/DEV PART 1

Rationale and Purpose of the Module:

This Block runs Year 1 Weeks 6 to 15 (10 Weeks) in the summer semester.

This block introduces students to the everyday complexities of developing a software systems and the challenges involved in maintaining and existing codebase. Such as understanding legacy code, changing requirements, code Integration, debugging, performance optimization and collaborating with a diverse, globally distributed development team.

The student will learn about the organisation's structure, culture, management, and the variety of roles fulfilled by team members. Each student will be hosted by an industry partner for their residency and will be embedded in the team of their technical mentor/line manager. Students will attend meetings in which the team plans and evaluates its work, and coordinates with other teams. Students will collaborate with and learn from the software engineers on their team, and from other experts across the rest of the organization.

Students will be required to maintain a personal log of their weekly progress in the form of submitted Weekly Reports, present a report on their placement via a recorded Presentation, and complete a Final Report.

Residency 1: Learning Outcomes

Cognitive

On successful completion of this module, students will be able to:

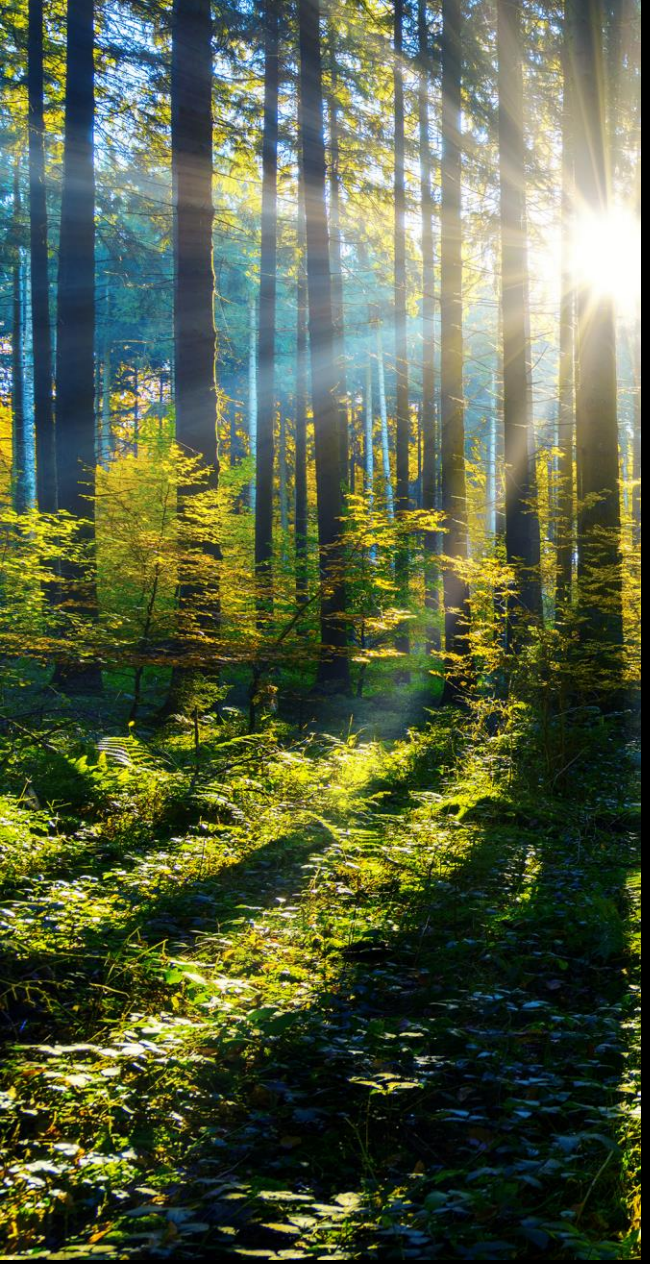
- Identify the roles played by team members in the organisation. *For example, business analyst architects, technical leads, developers, engineering managers, project managers, and others.*
- Develop competency in the programming language(s) and IDEs necessary to commit changes to the codebase
- Correctly utilise the required toolchains within the context of a development process where utilised by the industry partner
- Implement small scale corrective and/or adaptive changes to an application.
- Document changes as mandated by the organisation's standards
- Develop competency in creating concise weekly status reports for ISE faculty and industry partners, building an archive of content for the Final Report.
- Research and deliver a presentation on a residency topic

Residency 1: Learning Outcomes

Affective

On successful completion of this module, students will be able to:

- Update line managers as instructed and notify them of issues in a timely and precise manner.
- Adhere to schedules set out by team leads and project managers
- Respect and fully comply with all of the partner's codes of conduct
- Comply fully with NDAs and contracts
- Convey a professional manner at all times
- Present work in a precise and cohesive manner



CS4444 - RESIDENCY 2: SOFTWARE/SYSTEM DEV. PART 2

Rationale and Purpose of the Module:

This Block runs Year 2 Weeks 1 to 15 (15 Weeks) in the autumn semester.

This residency requires students to take a deeper dive into software development processes and tools introduced in Residency 1. Students will explore the enterprise and software architectures that they will work with. Students will add new features to an enterprise codebase or small greenfields development and present their work to their line manager and team through code inspections.

This residency builds on the challenges and learning outcomes from the first residency by increasing the complexity and scale of the tasks involved. Each student will be hosted by an industry partner for their residency and will be embedded in the team of their technical mentor/line manager. Students will attend meetings in which the team plans and evaluates its work, and coordinates with other teams. Students will collaborate with and learn from the software engineers on their team, and from other experts across the rest of the organization.

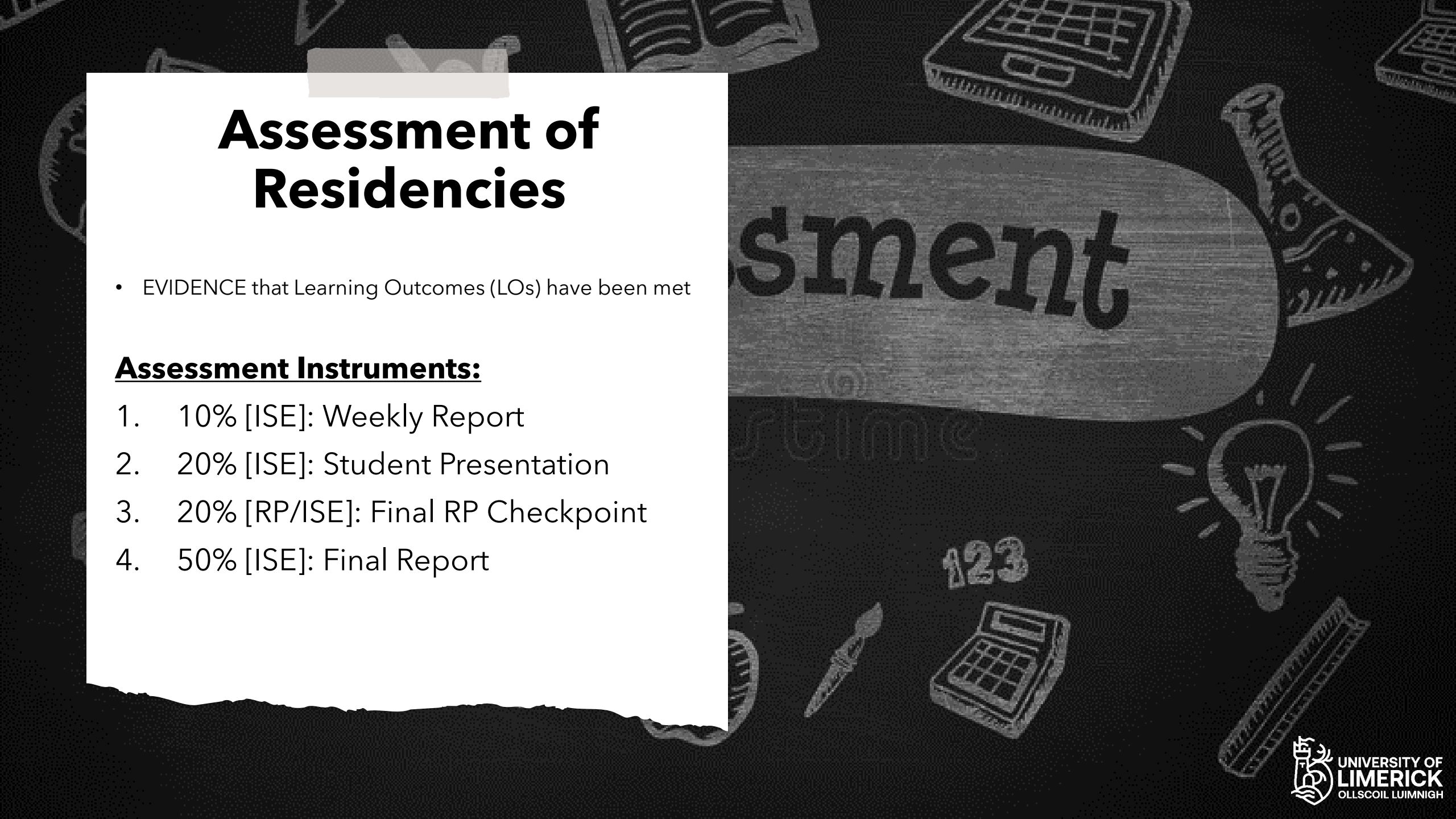
Students will be required to maintain a personal log of their weekly progress in the form of submitted Weekly Reports, present a report on their placement via a recorded Presentation, and complete a Final Report.

Assessment of Residencies

- EVIDENCE that Learning Outcomes (LOs) have been met

Assessment Instruments:

1. 10% [ISE]: Weekly Report
2. 20% [ISE]: Student Presentation
3. 20% [RP/ISE]: Final RP Checkpoint
4. 50% [ISE]: Final Report

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