Shortlisting Guidelines:

These guidelines are intended to facilitate comparability of scoring across many shortlisters.

During shortlisting, applicants should be scored based on their likely aptitude for research and fit for LIDo as evidenced by their academic record, how they describe their research experience and outcomes, personal statements, and responses to questions on interdisciplinarity and research interests. We are looking for students with evidence of achievement at the highest level considering their circumstances and potential for research.

Scoring: 4 (I would definitely want to interview this person for LIDo) to 1 (Does not meet minimum requirements below).

Please consider your unconscious bias training and applicants' backgrounds when shortlisting. Applicants who have followed an untraditional route but demonstrate impressive skills and aptitude may still score a 4. Where information is available, **please consider an applicant's circumstances and access to opportunities when evaluating their accomplishments**. We do not wish to exclude students from disadvantaged backgrounds or overseas who may have significantly less access to research opportunities either during their education or in extra-curricular settings, were taught in different educational systems, or from different cultures. Consider all mentioned mitigating circumstances. If any applicants haven't completed a research project, they should still be able to explain the rationale for their future research topic and the approaches they will take.

Remit: LIDo-DTP is funded by the BBSRC and supports research in biological sciences and biotechnology. Please carefully consider whether the applicant's expressed interests, prior education, and experience align with the BBSRC remit when scoring. Importantly, LIDo does not support clinical or therapeutic research into human disease. Applicants with primary experience and interest in medical research should be scored lower.

Topical Priorities: LIDo is an interdisciplinary program keen on promoting the application of physical/computational approaches to biology. In line with BBSRC's strategy, LIDo is also keen to attract more students with an interest in animal health and plant biology. Please consider providing an uplift in the score for applicants with strong backgrounds in physics, mathematics, computing, and plant and animal sciences.

Agility & Growth: We prioritise applicants who are intellectually curious, open-minded, and who possess the intellectual breath and horsepower to move outside their comfort zone into new fields. These applicants who can take full advantage of the breath of bioscience training in LIDo should be scored higher.

We expect that students that we interview would have:

- **Very good academic record** – a high 2i or better BSc/MSci with a substantial proportion of first-class module marks or an MSc/MRes Distinction. Given their relevance to research ability, Distinction grades for UG or PG projects are particularly desirable and may compensate for slightly lower overall grades.
- **Strong motivation and aptitude for PhD** – (Motivation) preferably evidenced by proactively seeking out research experience; (Aptitude) clear, complete and logical explanation of their project hypothesis, findings and implication; evidence of learning about the process of research from their research experience; evidence that research and practical skills have been acquired; these evidence for aptitude drawn from research as part of their degree program is sufficient.

- **Reasonably well-written personal statement** – preferably indicating interests in BBSRC-related research and in aspects of the LIDo program.
  Fit for LIDo – evidence of interest in interdisciplinary research including application of AI/ML and other computational methods to the biosciences, of capability to complete the Learn2Discover (L2D) course which has extensive AI/machine learning, and a strong desire to enter new fields outside their comfort zone. LIDo program emphasises interdisciplinarity between life sciences and physical sciences / engineering / mathematics / Ai and machine learning / computation.
- **Useful personality or intellectual traits** – such as independence, maturity, initiative, fortitude, perseverance, enthusiasm, cogency, and others that are important in a PhD. Evidenced by research, problem-solving, and other experiences in their personal statement. This is one area where shortlisters are expected to exercise personal judgement, since the possibilities are vast and not easily distilled into simple categories.

These scoring guidelines are NOT hard rules. We need shortlisters to exercise their own judgement and use their experience to highlight agile applicants that they think could have *high potential* for interdisciplinary research and success in the LIDo program. Given the diversity of backgrounds of applicants and PhD projects, it is difficult for any single shortlister to accurately assess performance and potential of all candidates. This is particularly true for applicants that might have unusual academic / career trajectories. For example, if you find yourself in the circumstance that the outline examples below indicate a lower score, but you would really want to interview the applicant, then give them a 4. *Indicate such atypical factors under comments.*

A student only needs to have one research experience to use as evidence on their application. **Covid19 restrictions significantly affected research opportunities for undergraduates during the 2019/2020, 2020/2021 and 2021/2022 academic years. This should be borne in mind when assessing applications from recent undergraduates. Care should be taken to recognise the value of alternative research experience, such as data analyses, literature reviews and other qualitative approaches.** Irrespective of the approach taken, successful applicants are expected to provide a compelling description of their hypotheses, findings, and the implications of their research.

Overseas students are scored in the same way as UK/EU students.

Scoring (integers only)

Below are examples for applicants who have followed a traditional route. Those with alternative or unusual routes should be scored according to the same criteria but taking into account their route.

4 = Definitely Interview

- **Excellent academic record** – First-class BSc/MSci or MSc/MRes Distinction. Predicted final grades supported by transcript evidence are sufficient)
- **Minimum one coherently described research experience** – research as part of their degree program is sufficient, and they can describe a future project that they are about to undertake.
- **Strong motivation and aptitude for PhD** – evidenced by proactively seeking out experience; clear, complete, and logical explanation of their project hypothesis, findings and implications; evidence of learning about the process of research from their research experience; evidence that research and practical skills have been acquired.
- **Reasonably well-written personal statement** – indicating BBSRC-related research interests and interests in aspects of the LIDo program**.**
- **Fit for LIDo** – evidence of interest in interdisciplinary research, including AI/Machine Learning; evidence of capability / potential to complete L2D course; conceptual understanding of mathematics (e.g., linear algebra, vectors) and biology (e.g., image analysis in cryo-EM,

biochemical or biophysical basis for experimental protocols); evidence of a desire to broaden their studies beyond their original field.

- **Several useful personality or intellectual traits** – such as independence, maturity, initiative, fortitude, perseverance, enthusiasm, cogency, and others that are important in a PhD. Evidenced by research and other experiences in their personal statement. Will require personal judgement from shortlisters.

3 = Possibly Interview

- Minimum high-2.1 (67%) BSc/MSci or high Merit MSc/MRes with distinction level project mark
- Minimum one coherently described research experience
- Lacking in one of the other criteria that would score a 4: e.g., not proactive about seeking a research experience; evidence of average research and practical skills; sketchy interest in BBSRC-related research; perhaps some misconceptions about aspects of the LIDo program; narrow scientific interest; little enthusiasm in moving outside comfort zone; apparent suitability and interest in, but no evidence of, interdisciplinary research or training.

2 = Unlikely to Interview

- Minimum high-2.1 BSc/MSci or high-Merit MSc/MRes with one distinction module
- One research experience
- Lacking in more than one of the criteria that would score a 4: e.g., not proactive about seeking a research experience; weak project description; evidence of average research and practical skills; sketchy interest in BBSRC-related research; limited interest and/or misconceptions about aspects of the LIDo program; narrow scientific interest; little enthusiasm in moving outside comfort zone; only limited evidence of interest, or suitability in, interdisciplinary research.

1 = Definitely not Interview

- Neither a high-2.1 BSc/MSci nor a high-Merit MSc/MRes with one distinction module

  OR

- Does not have any research experience

  OR

- Only interested in a narrow research area

  OR

- Meets the minimum high-2.1 BSc/MSci or high-Merit MSc/MRes with one distinction module
- Has one research experience but severely lacking one or more of the assessment criteria: e.g., poor project description; little evidence of understanding of the research process; very limited research and practical skills; no interest in or a lack of understanding of BBSRC-related research; no or little evidence of interest in aspects of the LIDo program; narrow scientific interest; no or little evidence of interest in interdisciplinary research or in moving outside comfort zone; weak evidence of capability to complete L2D such as low scores in quantitative modules.

Selection for Interview

Each application will be assessed by six LIDo academics who are distributed equitably across all eight LIDo institutions. For each application, shortlisters will each provide one **integer** score. The **average of six scores** (one from each shortlister) **will be used to rank the applicants**. Those with large score variance (e.g. having both 1s and 4s) will be discussed at a shortlisting meeting.

To diversify the research interests among each student cohort, we will select the set of top-ranked applicants for interview for each area of scientific interest (indicated by the applicant on the application form). We will use the proportion of scientific areas among recent project submissions by supervisors to determine the proportion of the applicants to interview from each scientific area.