1. **Title of the module**

BIOS8420 (BI842) - The IVF World

1. **School or partner institution which will be responsible for management of the module**

Biosciences

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 7

1. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Spring

1. **Prerequisite and co-requisite modules**

None

1. **The programmes of study to which the module contributes**

MSc Reproductive Medicine: Science and Ethics (compulsory)

MSc Biomedicine (optional)

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**

Have:

1. A broad knowledge and understanding of clinical and scientific aspects of IVF treatment as outlined in the course content.
2. The ability to search, synthesise and evaluate the scientific and medical literature pertaining to IVF.
3. The ability to analyse and evaluate unfamiliar scenarios and apply the knowledge gained in unfamiliar situations.
4. Competent practical skills similar to those practised by a clinical embryologist, (albeit using model organisms).
5. The ability present their skills as a well-presented laboratory notebook.
6. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**

Have:

1. An ability to search primary texts as well as secondary sources and marshal information effectively.
2. A critical, analytical perspective of the medical literature.
3. Some independence of thought and originality in the presentation of a scientific document.
4. The ability to reference the scientific and medical literature properly and present a bibliography in a means consistent with a scientific document.
5. The ability to present a range of media (graphs, tables, figures, video, large datasets etc.) in an appropriate fashion.
6. The ability to give a competent scientific presentation.
7. **A synopsis of the curriculum**

Around 1-2% of all babies in the UK are born by IVF, with varying figures in many other countries. Internationally, reproductive medicine generally, and IVF in particular, is an area in which the UK is world leading. This module will explore the many aspects of practical IVF (including ICSI, and PGD) and the factors that affect it. A feature of the module will be the presentation of similar issues from different perspectives e.g. that of the clinician, the counsellor and the laboratory manager.

A career as a scientist in reproductive medicine (e.g. clinical embryologist) is a popular path. Although the proposed module does not aim to address the specific goal of training prospective clinical embryologists in how to perform their operational tasks (such training is provided in-house in a highly regulated clinical environment and leads to a vocational qualification), this module will give students a realistic expectation of the likelihood of them excelling in, and enjoying, this popular career path. This module will thus explore the basics of lab technique and good practice, pipette making, egg collection and in-vitro maturation, sperm assessment, insemination, ICSI, embryo grading, assisted hatching, spreading and preimplantation diagnosis. For obvious reasons embryos from non-human model species (e.g. mouse, bovine, pig) will be used.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**
* A Textbook of In Vitro Fertilization and Assisted Reproduction: The Bourn Hall Guide to Clinical and Laboratory Practice: Includes Bourn Hall Protocols on CD-ROM. Peter R. Brinsden Informa Healthcare; 3rd edition (August 12, 2005)
* Students are given extra, current, reading lists in-course
1. **Learning and teaching methods**

Total contact hours: 45

Private study hours: 105

Total study hours: 150

1. **Assessment methods**
	1. Main assessment methods

30% - in-course assessment assignment of practical competences

70% - the quality of the reflective log and individual short tests e.g. media calculations, semen analysis, embryo grading, patient leaflet, mini-essay (1500 words), and final test (tests and calculations typically are from 20min – 1 hour)

13.2 Reassessment methods

Reassessment Instrument: 100% coursework

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *8.3* | *8.4* | *8.5* |  | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* | *9.6* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |
| *Private Study* | **x** |  | **x** |  | **x** |  | **x** | **x** | **x** | **x** | **x** | **x** |
| *Laboratory* |  | **x** | **x** | **x** | **x** |  |  |  |  |  | **x** | **x** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |
| *Calculations* |  |  |  | **x** |  |  |  |  |  |  | **x** |  |
| *Analyses* |  | **x** | **x** | **x** |  |  |  | **x** |  |  | **x** |  |
| *Mini Essay* | **x** | **x** |  |  |  |  | **x** | **x** | **x** | **x** |  | **x** |
| *Test* | **x** |  | **x** |  |  |  |  |  |  |  |  |  |
| *Lab book* |  |  | **x** | **x** | **x** |  |  |  | **x** |  |  |  |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

Biosciences is an international discipline. This module presents subject-specific knowledge, research approaches and techniques, generated, developed and refined by scientists around the world. Mastery of the learning outcomes will equip students to apply the theories and techniques of the module in a wide range of international contexts. In compiling the reading list, consideration has been given to the range of texts that are available internationally and a selection has been identified to complement the delivery of the material. The School of Biosciences is an international community of students and staff. Group activities e.g. in practicals, tutorials, workshops and self-study will naturally draw on the international make-up of the student body; the module teaching team includes members with international experience of teaching and research collaboration.

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**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

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| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 09/01/2019 | Minor | September 2019 | 7 |  |
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Revised FSO Jan 2018