
STATUTORY INSTRUMENTS

2021 No. 792

The Space Industry Regulations 2021

PART 7

Training, qualifications and medical fitness

CHAPTER 4

Training programme

Training programme

69.—(1) The licensee must establish and maintain a training programme—

(a) combining practical and theoretical training for—

- (i) all individuals who will be on board a launch vehicle or a carrier aircraft in flight⁽¹⁾;
- (ii) any other individual employed by the licensee who will perform a specified role;
- (iii) any other individual contracted to provide services for the licensee who will perform a specified role;

(b) providing training for individuals who participate in the licensed activities but do not perform a specified role or act in a specified capacity.

(2) The objective of the training programme is to ensure that all participants are adequately qualified, trained, and medically fit to perform their assigned duties or otherwise participate in the licensed activities.

(3) To achieve that objective, the training programme must include—

- (a) initial, proficiency and readiness training in accordance with paragraphs (4), (5) and (6) respectively for all relevant individuals;
- (b) initial and readiness training in accordance with paragraphs (4) and (6) for individuals who do not perform a specified role, and
- (c) assessments to determine—
 - (i) what training is required by relevant individuals;
 - (ii) whether individuals on a course of training have received and successfully completed all the necessary elements of that training (“a training assessment”);
 - (iii) if individuals are competent to perform their functions in relation to the licensed activities (“a competence assessment”).

(4) Initial training must enable individuals—

- (a) to become familiar with—
 - (i) the licensee’s organisation and methods of working;

⁽¹⁾ Regulation 140 (provision of information and training to crew) requires crew members referred to in that regulation to be given training about matters relating to exposure to cosmic radiation. Launch vehicle task specialists are treated as crew members for the purpose of that regulation by virtue of regulation 134(2) (interpretation).

- (ii) the safety regulations in Part 8, including the procedures set out in the safety operations manual applying to the licensed activities;
 - (iii) other regulations applying to the licensee and its licensed activities,
- where this is necessary to enable individuals to perform their roles, or to act as spaceflight participants,
- (b) to be made aware of human factors, and
 - (c) to receive general security awareness training in accordance with Chapter 4 of Part 11.
- (5) Proficiency training must be provided for each specified role to ensure that individuals appointed to perform that role—
- (a) satisfy the criteria specified in relation to that role in Part 1 of Schedule 3,
 - (b) receive the training specified in Part 3 of Schedule 3, and
 - (c) are able to perform the duties associated with that role and otherwise take part in the licensed activities.
- (6) Readiness training must be provided in relation to each mission undertaken by the licensee for all individuals who are to participate in that mission, to ensure that they—
- (a) understand the objectives of that mission;
 - (b) rehearse the role which they are to perform in the mission in accordance with regulation 70(5), and demonstrate adequate performance in that role.
- (7) The training programme must also provide training for spaceflight participants who do not perform a specified role in accordance with paragraphs 50 and 52 of Schedule 3.

Training and assessments

- 70.**—(1) Competence assessments must be conducted at intervals determined by the training manager, or in the case of a spaceport licensee who does not have a training manager, by the licensee.
- (2) No person who has failed a competence assessment relevant to a function may be permitted to perform that function until the person concerned has—
- (a) undertaken further training to address the reasons for that failure, and
 - (b) passed a further competence assessment.
- (3) Training and competence assessments for flight crew and remote pilots may be undertaken by one or more of the following methods, provided that the chosen methods cover all phases of flight of the launch vehicle to which the flight crew or remote pilots will be assigned—
- (a) flight in that launch vehicle;
 - (b) use of simulated training devices;
 - (c) flight in an aircraft—
 - (i) possessing similar characteristics to those of that launch vehicle, or
 - (ii) that has similar phases of flight to that launch vehicle.
- (4) No emergency situation may be simulated in a launch vehicle on which spaceflight participants are being carried, unless the only spaceflight participants on the flight are persons authorised by the regulator to train the crew or to check any aspect of the licensee’s spaceflight activities, including the work of the crew.
- (5) The licensee must, before a launch (a “mission”), conduct one or more rehearsals of the mission, in order to test its operational procedures and train staff in their operational duties.

(6) A mission rehearsal conducted under paragraph (5) must as nearly as possible reproduce the intended spaceflight, spaceport and range control activities which would be carried out on the mission, including—

- (a) normal and abnormal situations;
- (b) pre-launch, spaceflight and post-launch scenarios;
- (c) any conditions in space that could affect the operator’s spaceflight activity.

(7) A mission rehearsal conducted under paragraph (5) may include a spaceflight participant if this is necessary to enable the spaceflight participant to achieve the training objectives set for that participant, or to complete a competence assessment satisfactorily.

Training equipment

71.—(1) The licensee must ensure that it has access to sufficient training equipment to enable it to provide practical training where required as part of its training programme.

(2) Training equipment used for this purpose may include devices which are capable of simulating a launch vehicle, or any equipment or facilities which are used in the course of carrying out one or more of the licensed activities of the licensee (“a simulated training device”).

(3) A simulated training device may only be used if, so far as practically possible—

- (a) the device accurately represents the same configuration, graphical and instrument displays and environment as the launch vehicle, equipment or facilities it is simulating, and
- (b) the device accurately represents conditions on the launch vehicle, equipment or facilities it is simulating as they will be experienced during the course of a licensed activity.

(4) Any difference between the simulated training device and the actual launch vehicle, equipment or facilities which it is simulating must be identified and described as part of the training programme.

(5) The licensee may also use devices designed to reproduce the effects of spaceflight on the human body, such as the effects of acceleration, disorientation, loss of pressurisation or other adverse physical effects connected with spaceflight.

(6) The licensee must establish and maintain a system for monitoring any simulated training device or other device which is used in its training programme, to identify any changes in the capability or configuration of any such device and ensure that such changes do not reduce the effectiveness of any training or assessment for which that device is used.