

What is the Soyuz Spacecraft?

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About Soyuz Spacecraft:

- The Soyuz (saw-yooz) is a **Russian spacecraft**.
- The Soyuz programme is the **longest operational human spacecraft programme** in the history of space exploration.
- **What Can the Soyuz Do?**
 - Russian crew members are called cosmonauts. NASA crew members from the United States are called astronauts. Crew members from Europe, Canada, and Japan are also called astronauts.
 - The Soyuz **takes cosmonauts and astronauts to and from the ISS**.
 - The Soyuz spacecraft weigh 7 tonnes; they measure 7.2 m in length and 2.7 m in diameter. A Soyuz has **room for three people to ride** in it.
 - The spacecraft **also brings food, water, and other essential supplies** to the ISS.

- The Soyuz serves a **dual purpose**, acting as a **transportation vehicle and a safety measure**.
 - At least **one Soyuz remains docked to the space station at all times**, ready to serve as an **emergency escape pod** should the need arise, allowing the crew to quickly evacuate and return to Earth.
 - The Soyuz spacecraft consists of **three distinct modules**, each serving a specific purpose.
 - The **Orbital Module**, comparable in size to a large van, **provides living quarters** for the crew during their time in orbit and has the **capability to connect directly to the space station**.
 - The **Descent Module**, as its name suggests, is **utilized** by the crew **during the launch phase and the return journey** to Earth. It is specifically designed to withstand the rigors of reentry and ensure a safe landing.
 - The **third module houses** the spacecraft's **critical life support systems**, including batteries, solar panels, and steering engines, all of which are essential for the Soyuz's operation and the crew's well-being.
 - The Soyuz capsule is **propelled into space by a Soyuz rocket**, with the **two components separating once the spacecraft reaches orbit**.
 - While the **rocket returns to Earth**, the capsule continues its journey, remarkably reaching space in a mere nine minutes.
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Q1: What is the International Space Station (ISS)?

International Space Station (ISS) is a large spacecraft in orbit around Earth. It serves as a home where crews of astronauts and cosmonauts live. The space station is also a unique science laboratory. It is a unique international collaboration among five space agencies: NASA, Roscosmos, JAXA, ESA, and CSA. The International Space Station is made up of many different modules, each of which has a specific purpose.

Source: A Soyuz craft with 2 Russians and 1 American docks at the International Space Station

Source: <https://vajiramandravi.com/current-affairs/soyuz-spacecraft/>

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