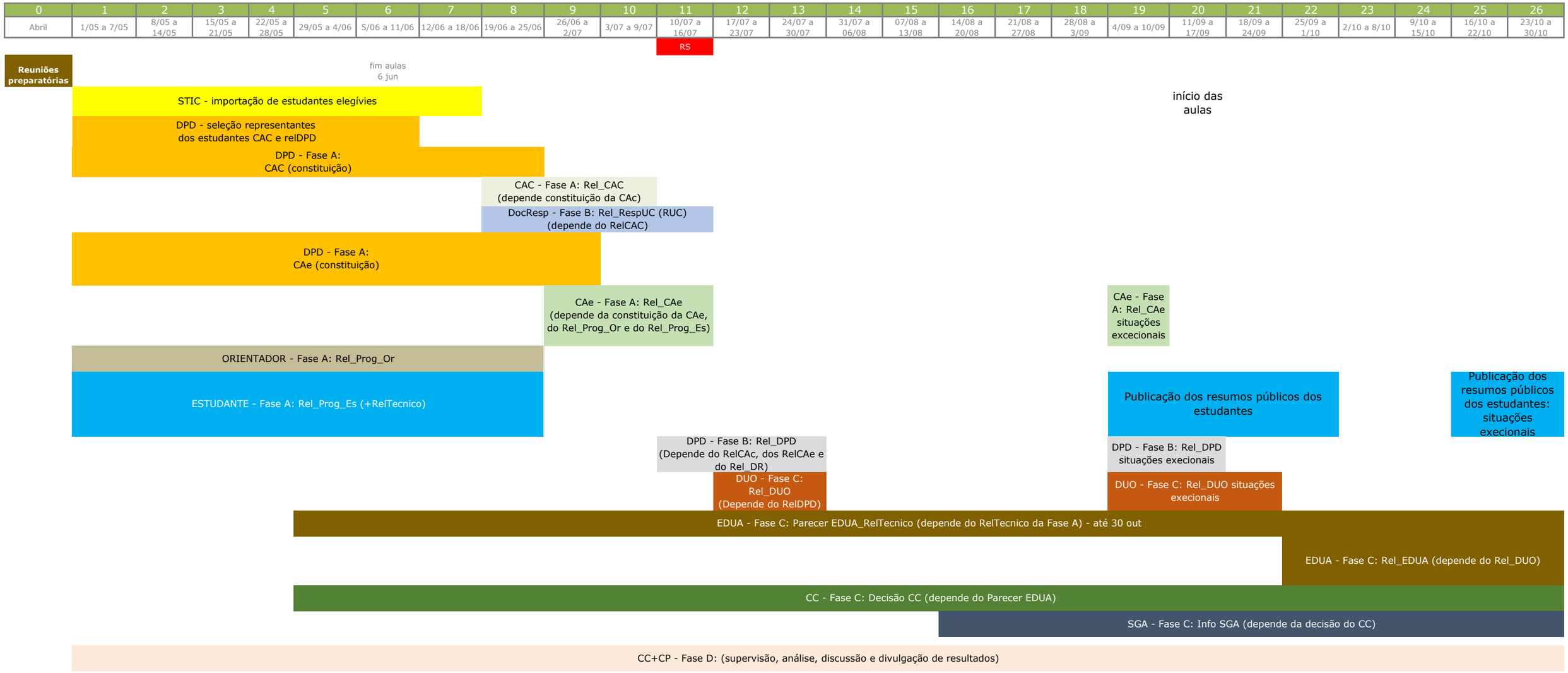SubGQ_PD 2022_23