WORK PLAN

1. General course astronomy, astrophysics, astrobiology and astro-culture - 4 days

1.1 Schedule

	Day 1	Day 2	Day 3	Day 4
08:00-09:30.	Opening/ Pre Course Assessment	Workshop 4	Workshop 8	Workshop 10
09:30-10:30	Lecture 1	Lecture 2	Lecture 3	Lecture 4
10:30-11:00	Coffee	Coffee	Coffee	Coffee
11:00-12:30.	Workshop 1	Workshop 5	Workshop 9	Workshop 11
12:30-14:00	Lunch	Lunch	Lunch	Lunch
14:00-15:30	Workshop 2	Workshop 6	Working Group 2	Lecture 5
15:30-16:00	Coffee	Coffee	Astronomical Visit	Post course Assessment/ closure
16:00-17:30	Workshop 3	Workshop 7	Astronomical Visit	
17:30-20:00	Dinner (free time)			
19:00-22:00	Working Group 1 Observation 1			

1.2 Themes of the lecture

1 - Stellar evolution
2 - Cosmology
3 – History of Astronomy
4 Solar System
5 – Origin and Evolution of lIfe

1.3 Topics of the workshops

1 - Local horizon and watches of sun
2 - Movement of the stars, the sun and the Moon
3 - Stages and eclipses
4 - Briefcase from the young astronomer
5 - Solar spectrum and sunspots
6 - Life of stars
7 - Astronomy beyond the visible
8 - Expansion of the Universe
9- Planets and exoplanets
10- Elements of Astrobiology
11- Cosmological Time Line

1.4 Topics for Working Groups

1 - Preparation observations

2 - Astronomy in the city or Arqueoastronomy

*- Debate on the teaching of astronomy in the host country/city. Meeting with posters to show the participating teachers experience. Exhibitions of astronomy books.

1.5 Evaluations

- At the beginning of the course, a written diagnostic evaluation is carried out (multiple choice). During the course evaluations are made through direct observations of the workshops, the participation and exchange of students.

- On the last day of the course, a final evaluation is made, which consists in the same test than diagnosis one (same paper, answers with different colour). After the assessment delivery, it is made the pooling the pooling becomes and the revision of the correct answers at that time.

-At the end of the course, one proceeds to the satisfaction survey delivery, which must be completed by the student and delivered to the NASE trainers to its assessment.

- Finally, one proceeds to an impact assessment (or monitoring of the learning transfer) after a few months. This task covers more of an axis of action:

a) An assessment is sent in a personalized way that inquires about the contents of the course (assimilation of concepts), the use of the contents in the classroom, how often these contents are used and whether they conform to the current curriculum.

b) Participants are provided with a template type, to report on specific activities, related to matters of NASE. In that worksheet you should indicate activity, space where it is developed, level and number of students, a brief description of what has been done and two photos. The projects generated from the course are shared in the NASE web page

c) The students of NASE are invited to propose new activities, according to the format of "Supplementary Material", which not only helps to enrich the reservoir of didactic resources in astronomy of NASE, but also allows you to assess how NASE promotes and stimulates new proposals.

- The submitted projects are organized according to the addressee age (between 3 and 11 years and between 12 and 18) and according to the themes, and they are shared in the web page of NASE

2 Course of Astronomy - 2 Days

2.1. Schedule

	Day 1	Day 2
16:00-17:30 hs.	Opening/Pre course evaluation	
17:30-18:30 hs.	Lecture 1	Lecture 2
18:30-20:00 hs.	Workshop 1	Workshop 3
20:00-20:30 hs.	break	break
20:30-22:00 hs.	Workshop 2	Workshop 4
22:00-22:30 hs.		Closing/ Post-course assessment

2.1 Themes of the lectures

1 - History of Astronomy
2- Solar System.

2.2 Topics of the workshops

1 - Local horizon and sundials.
2 - Simulators of movement
3 - Earth-Moon-Sun system: phases and eclipses
4 - Briefcase from the young astronomer

2.3 Evaluations

The evaluation of the course is equivalent to the general NASE

3- Course of Astrophyscs – 2 Days

3.1 Schedule

	Day 1	Day 2
08:00-09:30 hs.	Opening/Pre course evaluation	
09:30-10:30 hs.	Lecture 1	Lecture 2
10:30-12:00 hs.	Workshop 1	Workshop 3
12:00-12:30 hs.	break	break
12:30-14:00 hs.	Workshop 2	Workshop 4
14:00-14:30 hs.		Closing/ Post-course assessment

3.2 Themes of the Lectures

1 - Life of stars
2 - Cosmology

3.3 Topics of the workshops

1 - Solar Spectrum and sunspots
2 - Life of stars
3 - Astronomy outside the visible
4 - Expansion of the Universe

3.4 Evaluations

The evaluation of the course is equivalent to the general NASE

5 Course of **Astrobiology** – 2 days

5.1. Schedule

	Day 1	Day 2
08:00-09:30 hs.	Opening/Pre course evaluation	
09:30-10:30 hs.	Lecture 1	Lecture 2
10:30-12:00 hs.	Workshop 1	Workshop 3
12:00-12:30 hs.	break	break
12:30-14:00 hs.	Workshop 2	Workshop 4
14:00-14:30 hs.		Closing/ Post-course assessment

4.2 Themes of the conferences

1 – Solar System
2 – Origin and Evolution of life

4.3 Topics of the workshops

1– Astronomy outside the visible
2– Planets and exoplanets
3– Elements of Astrobiology
4– Cosmological Time Line

4.4 Evaluations

The evaluation of the course is equivalent to the general NASE course

6 Course of **Astro-culture** – 2 days

6.1. Schedule

	Day 1	Day 2
08:00-09:30 hs.	Opening/Pre course evaluation	
09:30-10:30 hs.	Lecture 1	Workshop 2
10:30-12:00 hs.	Workshop 1	Working group 2
12:00-12:30 hs.	break	break
12:30-14:00 hs.	Working group 1	Working Group 3
14:00-14:30 hs.		Closing/ Post-course assessment

5.2 Themes of the conferences

1 – History of Astronomy

5.3 Topics of the workshops

1 - Local horizon and sundials.
2 Simulators of movement

5.4 Topics for Working Groups

1 - Preparation observations
2 Astronomy in the city
3 Astronomical visit

5.5 Evaluations

The evaluation of the course is equivalent to the general NASE course