

North Carolina, USA - www.STEMstudytours.com

Tour: Barcelona & Valencia STEM

Destination: SPAIN

Specialization: Science, Technology, Engineering, Mathematics,

Language, Art & Culture

*Itinerary:* 7-days / 6-nights + overnight air (outbound)

	Baro	celona & Valen	icia STEI	M
Day	Morning	Afternoon		Evening
1	Travel to Barcelona, Spain on an overnight flight			
2	Arrive Barcelona; transfer to Hotel	Barcelona STEM Activities - Pick & Choose		Welcome, Safety & Orientation Dinner
3	Barcelona STEM Activities - Pick & Choose Dinner		Los Rambias Walk	
4	Barcelona Hop On/Off City Sightseeing Tour		Dinner & The Game	
5	Barcelona STEM Activities - Pick & Choose		Dinner	Poble Espanyol & Montjuic Fountains Show
6	Travel to Valencia (4hrs)	The Principe Felipe Science Museum		Check-in & Dinner
7	Valencia Science Museums - The Hemisferic & The Oceanographic		Valencia Sightseeing	Farewell Dinner
8	Transfer to Barcelona, depart for Home			







As with all sample itineraries, please be advised that this is an 'example' of a schedule and that the activities and hotels shown may be variable dependent upon dates, weather, special requests and other factors. Itineraries will be confirmed prior to travel.

**Barcelona....** Barcelona seems to find its way into most people's hearts, and for good reason! With

a vibrant food scene, awesome cosmopolitan feel, relaxed pace of life, breathtaking architecture, fantastic gastronomy, great Mediterranean weather, stunning beaches, some of the best seafood in all of Europe and arguably the best nightlife in Europe, what place could be more perfect than Barcelona?

This beachside city's bustling art scene and bohemian vibe make it a compelling place to put down some roots and stay for a bit. The streets of Barcelona are lined with unbelievable works of architecture, from Gothic churches to Antoni Gaudí's surreal buildings. As the second largest city in Spain, Barcelona is one of the most popular destinations in the world with a little bit of something to please everyone. It's a city steeped in history dating back to Roman times containing both the authentically historic and the wildly bizarre. From the scenic trails of the colorful Park Güell to the romantic narrow alleys of Barri Gòtic; from the beachside clubs to the city's dozens of sacred churches and architectural marvels, this city by the sea seems to attract all types with an almost overwhelming variety of things to do. Barcelona's energy is infectious, its historic streets intoxicating, and its people full of life.





**Day 1**Meals in flight

Fly overnight to Barcelona, Spain. Please check with your air carrier to determine if meals during flight have been included or if they are buy-on-board options. Sit back, relax and settle in. Next stop – Europe!

## **Day 2**Breakfast in flight; lunch & dinner included

Arrive in Barcelona, transfer to your hotel. Get settled and meet your Ambassador, have a quick lunch and start off on your first STEM adventure. Following this document is a list of options to choose from. Pick the ones that appeal to you most, but please do so in plenty of time (usually about 6-months prior to departure) so we can confirm space and your pricing.



After your first day of exploration, we'll come back to the hotel and then have our Welcome Dinner. During your dinner we'll also use this time to deliver a Welcome, Safety & Orientation overview. Get a good night's sleep tonight to compensate for the time zone change because tomorrow, it's full speed ahead!

Your hotel will be allocated upon booking. Please let us know your preferences when requesting a quote. From basic student hostel accommodation to luxurious city hotels, we are pleased to offer a wide range of suitable options for our groups. Hotel rates are contingent upon dates so please specify when requesting. Dependent

upon hotel options, breakfasts will generally be taken at your hotel, lunches are 'on your own' so we can stop at a variety of places and enjoy different types of food. Dinners are also generally at your hotel.

#### Day 3

#### Breakfast & dinners included; lunch on own

Good morning Barcelona! Prior to travel you will have selected the activities you wish to be included. You will have 12-hours of motorcoach time included with your quote. If you desire more time, no worries, we are happy to assist. Just let us know your needs and we can find the rates that work best for you. Your motorcoach time must include evening activity use if activities are not within a walkable distance from your hotel, therefore we suggest planning on a 10AM pick-up time and a 10PM drop-off time for initial planning purposes.

Most schools will opt to include two to three activities daily. Please view our list of offers starting on page 7. These include preliminary rates for your perusal.

This evening, we'll take a stroll down Barcelona's most famous boulevard, La Ramblas, down to the Columbus Monument at Port Vell.





**Day 4**Breakfast & dinners included; lunch on own

Today is a day for exploration and fun! Get ready to see all the sights you've heard so much about. On our hop-on/hop-off ticket, you'll be able to stop and explore the city all day long!



Barcelona City Sightseeing Hop-On/Off Bus (or similar) - The best way to see Barcelona! The tour covers 3 routes to explore everything from the most medieval to the most modern atmospheres in Barcelona across 40

stops. Enjoy being overwhelmed by the view of Antoni Gaudi's most outstanding works of art, admire the medieval architecture of the Gothic Quarter and the architectural splendor and modern luxury brands in Passeig de Gracia, and top it all up with a relaxing swim in the Mediterranean beaches or a visit to the vibrant Futbol Club Barcelona. Highlights include:

- Tour bus with 360-degree panoramic views of Barcelona's top sights
- Multilingual audio guides in 16 different languages featuring native speakers & free Wi-Fi on-board
- More than €200 in discounts to enjoy Barcelona's best attractions, sights & shopping opportunities
- No queues in high season: The exclusive red buses run every 5-minutes so virtually no waiting
- Access to 3-bus tour routes & 40 stops across Barcelona

This evening, we'll have dinner locally and then, The Game!



The Game – Barcelona - Set in the Old Gothic Quarter of Barcelona, this is a fun, educational and interactive experience. The Game is a hands-on group activity, like a treasure hunt, with a theme, challenges and a final prize. The aim is that each one of the participants learns about the city with a smile on their face. After meeting your game Director at Hard Rock Café, it begins! Groups split into 5 teams where they must use all their senses and follow the clues to arrive at locations where challenges will take place. They will have to work together as a group to successfully complete the challenge and get the clue to the next location. The first group to complete the 5 challenges and return to the meeting point will be entitled to proceed to the final challenge, where the "sixth" sense will be needed. The groups must all be back in 90-

minutes exactly. Prizes are awarded to the winning team!

# **Day 5**Breakfast & dinners included; lunch on own

Good morning Barcelona! It's another day of fantastic science excursions. After you have selected your activities, we'll customize your perfect itinerary. Most schools will opt to include two to three activities daily. Please view our list of offers starting on page 7. These include preliminary rates for your perusal.

This evening, after dinner, we'll explore Poble Espanyol & the beautiful Montjuic Fountains Show. Feel free to add in activity options while visiting Poble Espanyol.

#### Poble Espanyol (evening admission is included for all tours; extra costs apply to add on workshops)

Located in one of the most emblematic areas of Barcelona, very near the Montju'i'c Fountains, Poble Espanyol reveals the diversity of Spain in a pleasant and peaceful stroll. Come and enjoy the architecture, the traditions, the art and the soul of a whole country. Choose from standard admission (included in costs), a Guided Tour at €12 per person, a leather/enamel/basket/glass workshop ranging from €18 to €20 per person and dependent upon medium, a paella cooking show at €22 per person, or a Flamenco Class at €35 per person. Rates are valid for both students as well as staff.



within nearby Albufera Park, a wetlands reserve with a lake and walking trails.



**Day 6**Breakfast & dinners included; lunch on own

We'll get packed up this morning and board our coach for Valencia, approximately a 4-hour drive.

The port city of Valencia lies on Spain's southeastern coast, where the Turia River meets the Mediterranean Sea. It's known for its **City of Arts and Sciences**, with futuristic structures including a planetarium, an oceanarium and an interactive museum. Valencia also has several beaches, including some







While in Valencia, we'll be exploring their incredible Science Museum selections. Today's selection is:

The Príncipe Felipe Science Museum has become a world reference point for interactive science and one of the most visited destinations in the country, with over 27 million visitors since its inauguration in 2000. Its main objective is stimulating curiosity and critical thinking and at the same time, surprising and amusing the public by its contents from the world of science, technology, and the environment.

At the Science Museum you'll get the chance to experiment with electricity and to be surprised by its effects. Bells that ring without touching or candles that go out with a metallic wand without the need to blow are some of the experiences that will make your hair stand on end. Or check out live experiments on physics, chemistry, biology, and sound. Would you like to see how an egg can be fried with liquid nitrogen? Do you know how to start up a watch using only orange juice? And what about breaking a ball into a thousand pieces? Or perhaps participate in a "Robots" workshop or the demonstration "Cold, Cold" and "The terrifying vacuum".

After our full day, we'll check into our hotel and head to dinner!

#### Day 7

#### Breakfast & dinners included; lunch on own

Good morning Valencia! After breakfast, today we'll have the remaining two incredible Valencia Museums to visit:

**The Hemisfèric** was inaugurated in 1998 and was the first building in the City of Arts and Sciences to open its doors to the public. It is a spectacular construction designed by Santiago Calatrava, with an ovoid roof over 100-metres long that contains a large sphere that constitutes the projection room. Secondary school students attending the planetarium show 'Our Home in the Cosmos' are faced with a question: is there life in other places? In this digital planetarium session, they travel the solar system in search of these places and discover, among other things, what a supernova is, how stars form and evolve, how the sun affects the Earth for it to be inhabitable, how many exoplanets we know and where they are.

The Oceanographic - During their route through the various installations, visitors can get to know the behavior and way of life of over 45,000 individuals of 500 different species: dolphins, belugas, walruses, sea lions, seals, penguins, turtles, sharks, rays, sawfish, jellyfish, starfish, sea urchins, and crustaceans of all kind..., as well as wetland bird species such as those inhabiting the Albufera de Valencia and tropical mangrove swamps. Meet and discover the secrets of Humboldt Penguins; feed them and learn about their characteristics. Or experience something incredible when you visit "the other side of the Aquarium". Discover the best kept secrets of the biggest marine park in Europe. Learn about all the areas involved in caring for the animals as well as the systems that reproduce authentic environmental conditions. Learn about our park from the inside and get the answers to all your questions.

Afterwards, we'll get a **guided tour** of this amazing city!

Tonight, we'll enjoy a lovely farewell dinner. We will definitely miss beautiful Spain!

#### Day 8

Breakfast included but dependent upon departure time

Today we'll end our tour and start to travel home, taking memories away with us that will last forever. Your flight plan may have you flying direct from Valencia or coaching to Barcelona and flying out from there. Have extra time? Ask us about adding on Madrid, London, Paris, Lisbon, Rome or any number of stunning European cities. We are happy to serve you and generally offer educational tours throughout most countries.



## BARCELONA OPTIONS

## **ACTIVITIES, TOURS & MASTER CLASSES**

## Port of Barcelona - Science, Logistics & Infrastructure Master Class

In collaboration with the Port of Barcelona and its port community, we offer our participants a visit to the Port of Barcelona and its environment. In this course you can observe the operations firsthand, the traffic, infrastructure and the operators placed in the Port, through a boat tour. Moreover, you have the option to complement the visit with debate-lectures covering key concepts in transport, logistics and international business trade. Maritime Master Class - €700 per group; approximately 2—3 hours

#### Lectures - €200 per group; 1-hour lecture

- The port: the primary modal interchange hub
- Introduction to intermodal logistics
- Logistics and environment: energy efficiency
- The Trans-European Transport Network (TEN-T)

## La Sagrada Família

#### This option works well on Day 4 when you have your hop-on/off city tour for transport.

The Expiatory Church of La Sagrada Família is perhaps Gaudí's best known work and one on which he worked almost all his life. La Sagrada Familia is the most popular attraction in Barcelona, attracting nearly 2.8 million visitors each year. It is a large and intricate basilica designed by Antoni Gaudi. Construction began in 1882 and continues to this day. The building is predicted to be completed within the next 30 years. Students will be captivated by the design elements and the religious symbolism built into all the spaces of the church. A glorious exterior and interior make La Sagrada Familia truly unmissable.

#### Three options are available:

- **Self-guided school visit** €10 per person, maximum of 40 people in total; audio guides included
- **Self-guided school visit + 1 tower access** €17 per person, maximum of 38 people in total; audio guides included
- **Lead Solution 4 Educational visit with guide** €275 per group, students must be the same educational level and be from the same school; each group can have maximum of 35 students + 3 teachers (students between 12 and 15 years old) or 30 students + 3 teachers (students between 16 and 18 years old). Each group is allowed to be accompanied by 3 teachers maximum. The activity lasts approximately 1-hour and 15-minutes, adapted to the educational level of students, and available in English, French, Catalan, Spanish, German, Italian and Portuguese. This type of visit does not include visiting the tower, and unfortunately, you are unable to purchase tower-only ticketing.

#### **SEAT FACTORY SEAT**

Seat Factory is a well-known Spanish car enterprise which belongs to Volkswagen group. SEAT manufactures a huge variety of vehicles – from sport cars to familiar vans. During this visit you will be able to observe the collaboration of a car, step-by-step. The guide will show you the facility and you'll also get to observe how the final touches are added to a car ready to be sent into the retail chain. Available Monday to Friday only; maximum group size is 25 people, inclusive of students and staff, so groups may need to split up for this excursion. Minimum age is 16 years of age. Video: <a href="https://www.youtube.com/watch?v=gUKJW\_n73s4">www.youtube.com/watch?v=gUKJW\_n73s4</a> Complimentary.

## Danone (Dannon)

Danone is a French enterprise with factories around the world. Here you can learn about processes for obtaining milk products, such as yogurt, and even try some samples. View the installations and a short video about the history of Danone. This is a top company for lactic products within Europe and worldwide. **This tour requires a translator** as English language tours are not offered at this time. Monday through Friday only, minimum of 20 people, approximately 2-hours in duration; led by nutritionists. Complimentary.

#### PortAventura World Theme Parks (full-day excursion)

PortAventura is a fantastic leisure complex featuring the **PortAventura** and **Ferrariland** theme parks, the water park **Caribe Aquatic Park** and much more. Discover the six worlds of one of Europe's most iconic theme parks. An ideal destination in the Costa Dorada, one of Spain's most popular tourist areas; and just one hour from Barcelona! Minimum 20 students for group rates. Pricing varies based on which park you wish to attend, pricing ranges from €18 - €30 per student, €22 - €40 per adult.

#### **Museum of Chocolate**

At the Museum of Chocolate, we'll get to learn about the correlation of Science and Chocolate! The Barcelona Chocolate Museum is a dynamic element of education offering a playful and didactic space. It allows us to take a tour of the origins of chocolate, its arrival in Europe and its diffusion as an element between myth and reality. We'll have an opportunity for a tour with a guide who will explain the origin of cocoa, the process of making chocolate, the Catalan traditions and the characteristics of the chocolate figures displayed in the museum. Afterwards, we'll indulge in a Master Class linking the 'scientific knowledge' with the 'scientific field' of chocolate. €17 per person inclusive of students and staff

## Museu Futbol Club Barcelona - Camp Nou Experience

Enjoy the excitement of discovering the different spaces in the Camp Nou and the Museum which reveal so much about the values of effort, respect, ambition, teamwork and humility. FC Barcelona football club museum is the fourth most visited Barcelona Museum and has sporting artifacts from the club dating back 100 years. Tours include access to the museum and the pitch areas, plus a guided tour of the changing rooms, press rooms, VIP lounge, and observance of the pitch at ground level. You'll also get a chance to sit on the player benches and see what it's like to sit in the best seats of the stadium. Minimum of 20 students; approximately 1.5-hours. €22 per person inclusive of students and staff

#### **Maritime Museum of Barcelona**

Museu Maritim is one of the more specialist museums and covers the period 1750 to 1850. It includes many forms of maritime artifacts from Barcelona and the surrounding districts. After visiting this museum, you may want to take a quick stroll to see Mirador de Colom (the giant statue in honor of Christopher Columbus) and then on to Port Vell which is a picturesque walk across the marina. €6 per person inclusive of students and staff for admission. Guided Tour is €50 per group of up to 30 people.

## **Catalan Museum of Archaeology**

This museum has many interesting archaeology exhibits covered including periods during prehistoric times and ancient history. The curators have given particular emphasis on the archaeological remains from Catalunya. This museum is interesting if you want to learn more about the ancient history of Catalunya and is well worth a visit if only for the novelty of subject material. Complimentary!

#### **Picasso Museum**

The Museu Picasso welcomes student groups from around the world visiting Barcelona, offering them the chance to enjoy a visit to the museum with docents. With a methodology based on the importance of observing and dialoguing in front of the work of art, museum visits are a dynamic opportunity where students can actively participate in the learning process. The docent works as a moderator of this discussion, offering students the key notions to be able to go further in their knowledge, deepening it and making it more lasting with enriching conclusions.

The museum proposes an itinerary featuring five works from the collection, allowing the students to get to know the museum better and with it the life's work of Picasso. The artwork may be tailored to the educational level of the group. Group maximum is 25 people. If larger, groups can be split and enter at different intervals. Available from September through July, on Tuesdays, Wednesdays and Thursday from 3 PM onwards. Approximately 1-hour in length. Admission ticketing is €8 per person, workshop cost is €80 per group.

## **Ghosts of Barcelona** (evening walking tour)

You'll be spellbound by the tales of mystery that have been hidden among the streets of Barcelona for centuries. The tour tells spine-chilling tales that unfolded in the mists of time - from exorcisms, witchcraft, and haunted convents to reports of ghostly apparitions. What lurks behind the streets of Barcelona at nightfall? Which stories have left an indelible imprint on the lives of our forebears? Come and delve into Barcelona's mysteries. Approximately 2-hours, a walking tour. €12 per person.

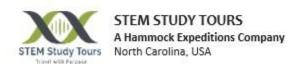
#### **Cava Emotions**

**Rural Engineers Master Class** - Become constructors for a day and challenge your engineering skills with an activity made of 3-4 tests where the group members are divided in teams that will rotate to design and build different structures. It is the ideal activity to enjoy construction, specially designed for groups, while team working is put into practice. It is composed by four challenges:

- **♣ Build a resistant pedestrian bridge** The teams will have to use teamwork, wood pieces, and a lot of imagination to build a real bridge over a stream able to resist the weight of a team member. Follow Davinci's steps using his technique!
- ▲ A tractor without engine With different wood pieces, carton, cutting material, union and paint, the team will have to build an effective tractor and be creative in decorating it. In the end, projects will be tested to determine if they can resist the weight of a team member.
- **A very tall tower** Big-scale version of the popular "jenga" game, with a limited period of time to raise a "jenga" while extracting the wood pieces from the inferior levels without making it fall. Good luck!
- ♣ An effective watering system With plastic pipes, flanges and links, the teams will have to build a canalization able to conduct water from one point to a recipient. Which team will succeed? Keep an eye on the little holes!
- Approximate duration is 3-hours for 20-40 guests. Fee is €35 per person.

## **Barcelona Stock Exchange**

The Stock Exchange in Barcelona was founded in 1915. A general index and nine sectorial indices are calculated in real time, daily. During the visit a "Broker" will provide you with detailed explanation on the methodology of the Stock Exchange and its indexes. You will also visit the centrally located Electronic Trading Centre – a gateway to the major national and international markets, which permits simultaneous trading on numerous international markets as well as direct interaction with investors. Maximum group size is 30 people, groups may need to be split if larger. Approximate time is 45-minutes; Monday through Fridays at 12:30. Only one group is allowed per



day, so please get requests in early. In order to visit the Barcelona Stock Exchange, you will be required to show valid identification to the Stock Exchange security service. Complimentary!

## La Fageda Yogurt Cooperative

Visit a cooperative which works with approximately 500 dairy cows! During the visit, students can see the production chain - from the maintenance of animals to milk production, finalizing with different products like milk, yogurts, cream, etc. Taste the products, watch a video about dairy farming, and have a discussion with various departments of the organization to get a true industry look. Located in Santa Pau, La Garrotxa Area. Visits are approximately 45 minutes to 1-hour on Tuesday through Fridays. Please have an interpreter available for English translation. Fee is €9 per person.

#### **Cardona Salt Mountain**

A visit to the Salt Mountain and Cultural Park inside the Old Nieves mine offers the opportunity to see the saline outcrop of Cardona and its outstanding natural and mineral heritage, which makes the area a truly unique place in the world. Geology, Mineralogy, Botany and History have a meeting point here. These minerals have been used since the Neolithic Age to present day. The tour is divided into 2 parts: On a 4x4 vehicle, the visitors are taken down to the entrance of the mine. From there, the tour on foot begins along several galleries inside the Mountain and continues outside to a building where the Maria Teresa mining shaft's machinery is located, as well as a photographic exhibition about the history of the mine. Along the way, a salt handicraft workshop can be seen. Approximately 2-hours in duration, visits not available on Mondays. Please have an interpreter available for English translation. Fee is €19 per person.

## **Moli Paperer Museum**

The Museu Moli Paperer (Capellades Paper Museum), founded in 1958, is one of the best museums in the world dedicated to paper. Located in an 18th Century paper mill, it is a living Museum where paper is still made by hand. It houses one of the most important collections of paper making tools and machinery, as well as papers and documents dating from the 12th to the 20th Centuries. The tradition of making paper in Catalonia goes back to 800 years ago and following in this tradition, the Museum continues to make high quality hand-made paper − Paper de Barba. It is housed in an old 18th Century mill in the small town of Capellades, 60-kms from Barcelona. Groups will have a guided tour of the permanent exhibition on paper and its history, and a visit to the basement which has all the tools to make paper. Also, you'll get to view the work of on-site artisans, a special Master Class to include a **Recycling Workshop**, plus **Analysis of Paper Fibers**. Fee is €8 per person.

## **Copper Museum**

Copper has been a vital metal of civilization since the beginning of history. First, in the transition from the Stone Age to the age of metals, later - in the construction of the first scientific instruments and as a dynamo for the Industrial Revolution, and even later - in the development of electricity, which began in the 19th Century. For this reason, La Farga Foundation and La Farga Group have created the Copper Museum, dating back to the early 20th Century next to the industrial installations of La Farga Group. A walkway enables visitors to see the production process involved in smelting and the semi-manufacturing processes for copper. The museum has 4 different areas: History of the Company, Copper and the origins of Metallurgy, the Chemical Element Copper and Technology and Applications of Copper. Available on Tuesdays and Thursdays, approximately 1.5-hours; fee is €5 per person.

#### Cosmo Caixa Museum

Cosmo Caixa, the science museum of "La Caixa" opened in 2004. Cosmo Caixa offers interactive, enjoyable science and an open door for anyone who is eager to learn and understand and who never stops wondering why things are the way they are. Cosmo Caixa Barcelona boasts the Geological Wall and the Amazon Flooded Forest, which features more than 100 plant and animal species that convince visitors they have been transported from the Mediterranean to the very heart of the tropical jungle. Explore your five senses −Cosmo Caixa offers a scientific and educational program that includes exhibitions, workshops, conferences, courses and debates involving experts from all over the world. The collections provide visitors with scientific information in an interesting way. Open Tuesdays through Sundays, 10 AM to 8 PM. School workshops are available from September through June; options changing every 3 months. Activities have a maximum of 30 passengers, group splits may be necessary. Admission is €5 per person; visits to the planetarium are available for purchase on site, at extra cost.

## Windmill Park – this is a full day excursion; the park is approximately 2-hours away via coach

Wind power is extracted from air flow using wind turbines or sails to produce mechanical or electrical power. Windmills are used for their mechanical power, wind pumps for water pumping, and sails to propel ships. Wind power as an alternative to fossil fuels, is plentiful, renewable, widely distributed, clean, produces no greenhouse gas emissions during operation, and uses little land. The net effects on the environment are generally less problematic than those from non-renewable power sources. Large wind farms can consist of hundreds of individual wind turbines which are connected to the electric power transmission network. Gansu Wind Farm, the largest wind farm in the world, has several thousands of turbines. The visit consists of an introduction to the renewable energies, watching a video about the windmills, a visit to the park, visit to control area and the storage area with different replacements for the mills (you cannot enter but It is possible to see the control and storage areas through the glass), then the impact of the windmill park will be explained. Please have an interpreter available for English translation. Fee is €200 per group.

## **Alba Synchrotron**

ALBA is a 3rd generation Synchrotron Light facility located in Cerdanyola del Vallès, (Barcelona), being the newest source in the Mediterranean area. It is a complex of electron accelerators used to produce synchrotron light, which allows the visualization of the atomic structure of matter as well as the study of its properties. The 3 GeV electron beam energy at ALBA is achieved by combining a Linear Accelerator (LINAC) and a low-emittance, full-energy BOOSTER placed in the same tunnel as the STORAGE RING. ALBA currently has seven operational state-of-the-art phase-I beamlines, comprising soft and hard X-rays, which are devoted mainly to biosciences, condensed matter (magnetic and electronic properties, nanoscience) and materials science. Additionally, two phase-II beamlines are in construction (infrared micro spectroscopy and low-energy ultra-high-resolution angular photoemission for complex materials). This large scientific infrastructure provides more than 5.000 hours of beam time per year and is available for the academic and the industrial sector, serving more than 1.000 researchers every year. The tours allow visitors to stroll the grounds and learn about the different experimental beamlines and synchrotron facilities in areas such as biology, materials science, physics and the environment. The duration is approximately 1-hour and 15-minutes, available Monday through Friday. Fee is €200 per group.

#### **Barcelona Desalination Plant**

The Desalination plant started to work in summer of 2009 becoming the largest facility in Europe to produce drinking water for human consumption. The plant was built to increase the amount of water available to supply more than 120 municipalities in the regional network of ATLL, which represents more than 4.5-million people. It is a modular plant that can produce up to 2.300-litters per second of high-quality water. The visit to the Barcelona Llobregat Desalination Plant includes an audio-visual presentation that explains the water cycle and the treatment needed to make water drinkable. After that, we will take a walking tour of the plant following

the same circuit that water does. You will also be provided with a brochure that summarizes the process of water desalination. Approximately 2-hours; maximum of 50 passengers. Fee is €200 per group.

## **Bujons Old Fharmacy**

In October 1842 Jose Bujons Palacio opened his drugstore in his family home; closing it in 1957. See the objects, products and instruments, remaining leaflets, XIXth and XXth century pharmaceutical advertising and the prescription pads of a pharmacy student of the 19th century. The space where the store was located, and the back room, were restored in 1990. During this workshop, students discover this ancient pharmacy's history, how a pharmacy operated in the 19th and 20th century, experimenting with medicine and remedies. Approximate tour duration is 2-hours, available Tuesday through Friday, maximum of 20-passengers per session. Please have an interpreter available for English translation. Fee is €5 per person.

#### Món St Benet & the Alicia Foundation

In this medieval visit, your students will be immersed in the life of a monastery, in which voices, everyday noises and images from the past emerge between the walls of this thousand-year-old monastery, converting this tour into a truly unique experience. The monastery includes the church, the cloister, the wine cellar and the cells in the Montserrat gallery enabling us to see what life was really like for the monastery community. After our monastery tour, we'll enjoy a cooking workshop.

**Roda el Món i torna al Born** (a Catalan proverb meaning to run all over the world and come back home to Barcelona). In this workshop students will learn how the discovery of America changed the food habits of the world with new products for the European continent. Due to this, new products were created to make typical dishes such as pizza. After our theory lesson, students are divided in three cooking groups. One group will make a flat bread, another group a tomato sauce and the last one a spice chocolate. Enjoy!

**The Alicia Foundation** is a research center devoted to technological innovation in cuisine, to the improvement of eating habits and to the evaluation of the food and gastronomic heritage. Approximate tour duration is 3-hours. Fee is €25 per person.

## The Hospital of Sant Pau

The Hospital de la Sant Creu i Sant Pau has always been decisive in the development of medicine, teaching, pharmacy and the internal organization of caring for the sick as individuals. It was one of the first hospitals where welfare and quality of life were considered, along with attention to hygiene. The guided tour of the Sant Pau Art Nouveau Site is an adventure. Duration is approximately 1-hour and covers several parts of the site and the garden, giving you details and curious facts from their history as well as the ins and outs of the Hospital currently being renovated and early 20th-century Barcelona society. The tours are given in small groups with a maximum of 30 people, accompanied by a guide. Duration is approximately 1-hour and 15-minutes; group fee is €145.

## **BARCELONA & VALENCIA STEM**

Minimum Booking Numbers: 20 students

What's Included: Roundtrip international flights

6-nights' accommodation in Spain: 4-nights in Barcelona, 2-nights in

Valencia

Airport transfers by motorcoach, coach to Valencia

12 hours of Barcelona motorcoach transportation on Days 3 & 5; 6

hours of time on Day 2

Meals in destination - Breakfasts & dinners daily starting with dinner

on arrival and ending with breakfast on of departure

Lunch on Day 2

City Sightseeing Hop-On/Off 1-day ticket

Entrance fees to Poble Espanyol

Montjuic Fountains Show

La Ramblas walk

The Game

The Principe Felipe Science Museum

The Hemisferic Museum
The Oceanographic Museum

Activities per selection (at costs indicated)

Personal Tour Ambassador

Fund-a-Forest: A tree is planted in the name of each guest Dollar\$ For Scholars: \$2 donation in the name of each guest

24-hour emergency cover

What's Not Included: Fully comprehensive insurance (mandatory)

Transfers to/from home airport

Meals not shown as 'included' above (lunches)

Cost of visas, full or collective passports

Cost of inoculations or medication required for travel Sightseeing / Entertainment Options not shown in Itinerary

Hotel incidental deposits & bills – meals, mini-bar items, recreation,

purchases billed to room, etc.

Any gratuities – coach drivers, maid/ bellman services, Ambassador,

local guides

As always, our staff are always available to you to answer any questions you may have regarding programming.

If we may serve you in any way, please do not hesitate to contact us.