

Day 1 - November 6 th , 2023	
09:00 – 09:30	Arrival and registration
09:30 – 09:45	Welcome and introduction to the course <i>Giovanna Benvenuto, SZN</i>
09:45 – 10:30	Lesson: Sample preparation for EM – Chemical fixation <i>Giovanna Benvenuto, Stazione Zoologica Napoli</i> <i>Paolo Ronchi, EMBL Heidelberg</i>
10:30 – 10:45	Coffee break
10:45 – 11:30	Lecture: Immunolabelling for electron microscopy <i>Raman Parashuraman, Euro-Bioimaging Napoli</i>
11:30 – 12:15	Lecture: Correlative light-electron microscopy <i>Roman Polishchuck, TIGEM, Napoli</i>
12:15 – 14:00	Lunch
14:00 – 16:00	Practicals: Sample preparation for SEM Group 1 – fixation, dehydration, critical point drying, sputtering Group 2 – sample sorting, protocol discussion
16:00 – 17:00	Coffee break – Applicants' presentations
17:00 – 19:00	Practicals: Sample preparation for SEM Group 1 – sample sorting, protocol discussion Group 2 – fixation, dehydration, critical point drying, sputtering
Day 2 - November 7 th , 2023	
09:00 – 09:45	Lesson: Sample preparation for EM–High pressure freezing and freeze substitution <i>Frédéric Leroux, Leica Microsystems</i>
09:45 – 10:30	Lecture: What can be viewed at light and electron microscopy during the fertilization of echinoderm eggs? <i>Luigia Santella, Stazione Zoologica Napoli</i>
10:30 – 10:45	Coffee break
11:00 – 12:00	Keynote lecture: Cell type evolution: Morphofeatures and molecular signatures <i>Detlev Arendt, EMBL Heidelberg</i>
12:00 – 14:00	Lunch
14:00 – 16:00	Practicals: sample preparation for EM Group 1 – High Pressure Freezing Group 2 – Ultramicrotomy
16:00 – 16:30	Coffee break – Meet the speakers
16:30 – 18:30	Practicals: sample preparation for EM Group 1 – High Pressure Freezing Group 2 – Ultramicrotomy
19:30	Social Dinner
Day 3 - November 8 th , 2023	
09:00 – 09:45	Lesson: Image formation in TEM and SEM <i>Fabio Formiggini, Istituto Italiano di tecnologia, Stazione Zoologica Napoli</i>
09:45 – 10:30	Lesson: Use of SEM and TEM in Taxonomy of Marine Organisms <i>Diana Sarno, Stazione Zoologica Napoli</i>
10:30 – 10:45	Coffee break
10:45 – 11:30	Lecture: Correlative volume electron microscopy to study the 3D ultrastructure of marine organisms <i>Paolo Ronchi, EMBL, Heidelberg</i>
11:30 – 12:30	Practicals: observation of samples at TEM and SEM Group 1 – TEM Group 2 – SEM
12:30 – 14:00	Lunch
14:00 – 15:30	Practicals: observation of samples at TEM and SEM Group 1 – SEM Group 2 – TEM
15:30 – 16:00	Closing remarks <i>Giovanna Benvenuto and Paolo Ronchi</i>
16:00 – 18:00	Optional: Discuss your project and/or reserve your in-depth practical on available instruments