

## Schedule of the PhD courses 2013

Please check detailed programs and contact teacher(s) or course manager(s) by e-mail.

     winter term,      spring term,      summer term,      fall term,

|    | Title                                                                                                                                                                                                                                                                        | Period / dates                                                                                                                                                                                                                                                                                                                                                                                                                                          | CFU  |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1  | <b>Rilevamento dati di terreno: strumenti hardware e software per applicazioni in ambito geologico ambientale/ Field data collection: hardware and software instruments for environmental geology applications</b>                                                           | <b>Aula informatica 4 – Torino Esposizioni</b><br>Tuesday 26 <sup>th</sup> February 9-13<br>Wednesday 27 <sup>th</sup> February 9-13<br>Thursday 28 <sup>th</sup> February 9-13<br>Friday 1 <sup>st</sup> March 9-18                                                                                                                                                                                                                                    | 5    |
| 2  | <b>Introduzione ai Sistemi di Posizionamento Globale: teoria ed applicazioni in campo geologico/Introduction to GNSS: theory and applications in geology</b>                                                                                                                 | <b>Aula informatica 4 – Torino Esposizioni</b><br>Wednesday 20 <sup>th</sup> March 14-18<br>Thursday 21 <sup>st</sup> March 9-13<br>Friday 22 <sup>nd</sup> March 9-18                                                                                                                                                                                                                                                                                  | 3.25 |
| 3  | <b>Reologia dei geomateriali / Geomaterials' rheology</b>                                                                                                                                                                                                                    | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Thursday 14 <sup>th</sup> March: 9-12 / 14-17<br>Friday 15 <sup>th</sup> March: 9-12 / 14-17                                                                                                                                                                                                                                                                                              | 3    |
| 4  | <b>Utilizzo degli isotopi della progenie del radon nelle Scienze della Terra / The use of radon progeny isotopes in Earth Sciences</b>                                                                                                                                       | <b>Aula 3 (Via Valperga Caluso, 35, 3° floor)</b><br>Friday 8 <sup>th</sup> March: 10-13<br>Friday 15 <sup>th</sup> March: 10-13<br>Friday 22 <sup>nd</sup> March: 10-13<br>Friday 5 <sup>th</sup> April: 9-13                                                                                                                                                                                                                                          | 3    |
| 5  | <b>Strumenti per le ricerche bibliografiche in Rete / On-line bibliographic research tools</b>                                                                                                                                                                               | <b>Aula informatica 4 – Torino Esposizioni</b><br>Wednesday 27 <sup>th</sup> March 9:00-13:00<br>Thursday 28 <sup>th</sup> March 9:00-13:00                                                                                                                                                                                                                                                                                                             | 2    |
| 6  | <b>Metodi microanalitici per la caratterizzazione dei materiali geologici / Microprobe methods for geological materials characterization</b>                                                                                                                                 | <b>Aula Sturani (Via Valperga Caluso, 35, 3° floor)</b><br>Monday 15 <sup>th</sup> April 10-12<br>Tuesday 16 <sup>th</sup> April 10-12<br>Wednesday 17 <sup>th</sup> April 10-12<br>Thursday 18 <sup>th</sup> April 10-12<br><b>Laboratorio SEM-EDS</b><br>(Via Valperga Caluso, 35, -1° floor)<br>Monday 15 <sup>th</sup> April 14-18<br>Tuesday 16 <sup>th</sup> April 14-18<br><b>Aula Sturani (Test Finale)</b><br>Friday 19 <sup>th</sup> April 11 | 4    |
| 7  | <b>Magnetismo delle rocce: contributi alla vulcanologia / Rock-magnetism: contribution to volcanology</b>                                                                                                                                                                    | <b>Alpine Laboratory of Paleomagnetism</b><br>(Via Madonna dei Boschi, Peveragno, Cuneo)<br>Aprile – Maggio                                                                                                                                                                                                                                                                                                                                             | 3    |
| 8  | <b>Cenni di spettroscopia Raman applicata alle scienze geologiche ed ambientali / Raman spectroscopy applied to geological and environmental sciences</b>                                                                                                                    | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Tuesday 7 <sup>th</sup> May: 9-13                                                                                                                                                                                                                                                                                                                                                         | 1    |
| 9  | <b>Corso pratico di utilizzo della microspettroscopia Raman / Raman microspectroscopy: practical course.</b>                                                                                                                                                                 | <b>Laboratorio Microraman</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Wednesday 8 <sup>th</sup> May: 9-13/14-18<br>Thursday 9 <sup>th</sup> May: 9-13/14-18                                                                                                                                                                                                                                                                                           | 1    |
| 10 | <b>La microfluorescenza a raggi X: principi generali e applicazioni nel campo delle Scienze geologiche, chimiche, dei materiali e dei Beni Culturali/ X-ray microfluorescence: principles and applications to geology, chemistry, material science and Cultural Heritage</b> | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Monday 13 <sup>th</sup> May: 10-12 / 14-16<br>Tuesday 14 <sup>th</sup> May: 10-12 / 14-18<br>Wednesday 15 <sup>th</sup> May: 9-13 Lab work (optional)                                                                                                                                                                                                                                     | 2.5  |

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|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 11 | <b>Creazione, implementazione e valorizzazione delle collezioni scientifiche: il caso delle Scienze della Terra</b> / <i>The importance of the scientific collections: the Earth Science Case History</i>                               | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Friday 17 <sup>th</sup> May: 10-12/14-16                                                                                                                                                                                                                                                                                                                  | 1   |
| 12 | <b>Cristallografia Descrittiva</b> / <i>Introduction to Crystallography</i>                                                                                                                                                             | <b>Aula Cannizzaro</b> (via P-Giuria 7)<br><span style="background-color: magenta;">May- June</span>                                                                                                                                                                                                                                                                                                                    | 2   |
| 13 | <b>Stabilità dei pendii</b> / <i>Slope stability</i>                                                                                                                                                                                    | <b>Aula B</b> (Via Massimo Azeglio, 44)<br>Tuesday 4 <sup>th</sup> June: 9-13<br>Tuesday 11 <sup>th</sup> June: 9-13<br><b>Aula ToExpo</b><br>Wednesday 5 <sup>th</sup> June: 9-13<br><b>Aula IV</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Thursday 6 <sup>th</sup> June: 9-13<br>Thursday 13 <sup>th</sup> June: 9-13                                                                                              | 5   |
| 14 | <b>Proprietà termo-elastiche dei minerali e loro ruolo nelle modellizzazioni geodinamiche del mantello terrestre</b> / <i>Thermo-elastic properties of Minerals, and their role in the geodynamical modelling of the Earth's mantle</i> | <span style="background-color: magenta;">???</span>                                                                                                                                                                                                                                                                                                                                                                     | 3   |
| 15 | <b>Corso teorico-pratico di apprendimento all'uso di TEM-EDS</b> / <i>Theoretical and practical learning course for TEM-EDS utilization</i>                                                                                             | <b>Aula 5</b> (Via Valperga Caluso, 35, 3° floor)<br>Monday 17 <sup>th</sup> June: 11-13<br>Tuesday 18 <sup>th</sup> June: 9-13<br>Wednesday 19 <sup>th</sup> June: 9-13<br>Thursday 20 <sup>th</sup> June: 9-13<br><span style="background-color: green;">Friday 21<sup>st</sup> June: 9-13</span><br><span style="background-color: green;">Monday 24<sup>th</sup> June: 9-13</span>                                  | 5.5 |
| 16 | <b>Gestione di Terre e rocce da scavo</b> / <i>Soils and rocks from excavation works: correct management</i>                                                                                                                            | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Wednesday 10 <sup>th</sup> July: 9-13<br>Thursday 11 <sup>th</sup> July: 9-13                                                                                                                                                                                                                                                                             | 2.5 |
| 17 | <b>Tecniche di indagine dei siti contaminati</b> / <i>Investigation techniques of contaminated sites</i>                                                                                                                                | <span style="background-color: green;">Aula 5</span> (Via Valperga Caluso, 35, 3° floor)<br>Wednesday 10 <sup>th</sup> July: 14-18<br><span style="background-color: grey;">Aula Ruffini</span> (Via Valperga Caluso, 35, 1° floor)<br>Monday 16 <sup>th</sup> September: 14-18<br><span style="background-color: grey;">Aula 3</span> (Via Valperga Caluso, 35, 1° floor)<br>Tuesday 17 <sup>th</sup> September: 14-18 | 3   |
| 18 | <b>Introduzione al monitoraggio dei fenomeni franosi</b> / <i>Introduction to landslide monitoring phenomena</i>                                                                                                                        | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Wednesday 18 <sup>th</sup> September: 9-13<br>Thursday 19 <sup>th</sup> September: 9-13<br>Friday 20 <sup>th</sup> September: 9-13                                                                                                                                                                                                                        | 3.5 |
| 19 | <b>Gestione e valorizzazione dei materiali di scarto derivanti dall'attività estrattiva</b> / <i>Exploitation and management of mining and quarrying waste</i>                                                                          | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Wednesday 30 <sup>th</sup> October: 9-13<br>Thursday 31 <sup>st</sup> October: 9-13                                                                                                                                                                                                                                                                       | 2.5 |
| 20 | <b>I sistemi di allerta per i processi di versante</b> / <i>The Early Warning Systems for slope failures</i>                                                                                                                            | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)                                                                                                                                                                                                                                                                                                                                                              | 2.5 |

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| Title     |                                                                                                                                                                                                            | Period / dates                                                                                                                                                                                                         | CFU        |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|           |                                                                                                                                                                                                            | Thursday 26 <sup>th</sup> September: 8:30-13:30<br>Friday 27 <sup>th</sup> September: 8:30-13:30                                                                                                                       |            |
| <b>21</b> | <b>Principi e applicazioni della catodoluminescenza in geologia del sedimentario / Principles and applications of cathodo-luminescence in sedimentary geology</b>                                          | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Wednesday 2 <sup>nd</sup> October: 10-17<br>Thursday 3 <sup>rd</sup> October: 10-17<br>Friday 4 <sup>th</sup> October: 10-17                             | <b>4</b>   |
| <b>22</b> | <b>I nitrati nelle acque sotterranee: distribuzione, origine, attenuazione e condizionamenti idrogeologici / Nitrate in groundwater: distribution, origin, mitigation and hydrogeological conditioning</b> | <b>Aula Sturani</b><br>(Via Valperga Caluso, 35, 3° floor)<br>Monday 7 <sup>th</sup> November: 10-13 / 14-17                                                                                                           | <b>1.5</b> |
| <b>23</b> | <b>Introduzione all'analisi statistica dei dati utilizzando il programma R-project / Introduction to statistical analysis by R-project</b>                                                                 | <b>Aula informatica 4 – Torino Esposizioni</b><br>Monday 7 <sup>th</sup> October: 9-12<br>Wednesday 9 <sup>th</sup> October: 9-12<br>Monday 14 <sup>th</sup> October: 9-12<br>Wednesday 16 <sup>th</sup> October: 9-12 | <b>3</b>   |