

## // Master 2 sciences de la matière – parcours Physique

### // Calendrier annuel 2025-2026

- **Début des cours le 01/09/2025 à 8h00**
- La réunion de rentrée aura lieu le **01/09/2025 à 10:00**. Présence de tous les étudiants obligatoire.
- Un projet de stage devra être déposé aux responsables de formation avant le **15/01/2026**.
- Durée minimale du stage: 16 semaines (21 ECTS)
- Soutenances de stage à partir du 06/07/2026.

| Période |             | Début | Fin   | Période |             | Début | Fin   |
|---------|-------------|-------|-------|---------|-------------|-------|-------|
| 3A      | Cours       | 1/9   | 17/10 | 4A      | Ecole       | 12/1  | 16/1  |
|         | Révisions   | 20/10 | 24/10 |         | Cours       | 19/1  | 20/2  |
|         | Examens     | 27/10 | 31/10 |         | Examens     | 26/2  | 3/3   |
|         | Rattrapages | 15/12 | 19/12 |         | Break       | 4/3   | 6/3   |
| 3B      | Cours       | 3/11  | 19/12 |         | Rattrapages | 29/06 | 03/07 |
|         | Break       | 20/12 | 4/1   | 4B      | Stage       | 9/3   | 26/06 |
|         | Examens     | 5/1   | 9/1   |         | Soutenances | 06/07 | 10/07 |
|         | Rattrapages | 23/2  | 27/2  |         |             |       |       |
|         |             |       |       |         |             |       |       |

|   | Septembre |      |      |      | Octobre |       |       |       | Novembre |      |       |       | Décembre |      |       |       | Janvier |       |      |      | Février |      |     |      | Mars |      |     |      |      |      |
|---|-----------|------|------|------|---------|-------|-------|-------|----------|------|-------|-------|----------|------|-------|-------|---------|-------|------|------|---------|------|-----|------|------|------|-----|------|------|------|
| L | 1/9       | 8/9  | 15/9 | 22/9 | 29/9    | 6/10  | 13/10 | 20/10 | 27/10    | 3/11 | 10/11 | 17/11 | 24/11    | 1/12 | 8/12  | 15/12 | 22/12   | 29/12 | 5/1  | 12/1 | 19/1    | 26/1 | 2/2 | 9/2  | 16/2 | 23/2 | 2/3 | 9/3  | 16/3 | 23/3 |
| M | 2/9       | 9/9  | 16/9 | 23/9 | 30/9    | 7/10  | 14/10 | 21/10 | 28/10    | 4/11 | 11/11 | 18/11 | 25/11    | 2/12 | 9/12  | 16/12 | 23/12   | 30/12 | 6/1  | 13/1 | 20/1    | 27/1 | 3/2 | 10/2 | 17/2 | 24/2 | 3/3 | 10/3 | 17/3 | 24/3 |
| M | 3/9       | 10/9 | 17/9 | 24/9 | 1/10    | 8/10  | 15/10 | 22/10 | 29/10    | 5/11 | 12/11 | 19/11 | 26/11    | 3/12 | 10/12 | 17/12 | 24/12   | 31/12 | 7/1  | 14/1 | 21/1    | 28/1 | 4/2 | 11/2 | 18/2 | 25/2 | 4/3 | 11/3 | 18/3 | 25/3 |
| J | 4/9       | 11/9 | 18/9 | 25/9 | 2/10    | 9/10  | 16/10 | 23/10 | 30/10    | 6/11 | 13/11 | 20/11 | 27/11    | 4/12 | 11/12 | 18/12 | 25/12   | 1/1   | 8/1  | 15/1 | 22/1    | 29/1 | 5/2 | 12/2 | 19/2 | 26/2 | 5/3 | 12/3 | 19/3 | 26/3 |
| V | 5/9       | 12/9 | 19/9 | 26/9 | 3/10    | 10/10 | 17/10 | 24/10 | 31/10    | 7/11 | 14/11 | 21/11 | 28/11    | 5/12 | 12/12 | 19/12 | 26/12   | 2/1   | 9/1  | 16/1 | 23/1    | 30/1 | 6/2 | 13/2 | 20/2 | 27/2 | 6/3 | 13/3 | 20/3 | 27/3 |
| S | 6/9       | 13/9 | 20/9 | 27/9 | 4/10    | 11/10 | 18/10 | 25/10 | 1/11     | 8/11 | 15/11 | 22/11 | 29/11    | 6/12 | 13/12 | 20/12 | 27/12   | 3/1   | 10/1 | 17/1 | 24/1    | 31/1 | 7/2 | 14/2 | 21/2 | 28/2 | 7/3 | 14/3 | 21/3 | 28/3 |
| D | 7/9       | 14/9 | 21/9 | 28/9 | 5/10    | 12/10 | 19/10 | 26/10 | 2/11     | 9/11 | 16/11 | 23/11 | 30/11    | 7/12 | 14/12 | 21/12 | 28/12   | 4/1   | 11/1 | 18/1 | 25/1    | 1/2  | 8/2 | 15/2 | 22/2 | 1/3  | 8/3 | 15/3 | 22/3 | 29/3 |

// Master 2 sciences de la matière – parcours Physique: concepts et applications

//Semestre 3A : 01/09 - 17/10

// Master 2 sciences de la matière – parcours Physique: concepts et applications

Cours: 24h TD: 12h ECTS: 6

|               | Lundi                                                     |                                                              |           | Mardi                                                      |                                                              |        | Mercredi                                                           |       |     | Jeudi                                                      |                                                           |      | Vendredi                                                    |                                                                    |      |
|---------------|-----------------------------------------------------------|--------------------------------------------------------------|-----------|------------------------------------------------------------|--------------------------------------------------------------|--------|--------------------------------------------------------------------|-------|-----|------------------------------------------------------------|-----------------------------------------------------------|------|-------------------------------------------------------------|--------------------------------------------------------------------|------|
|               | Cours                                                     |                                                              | Amphi     | Cours                                                      | Amphi                                                        |        | Cours                                                              | Amphi |     | Cours                                                      | Amphi                                                     |      | Cours                                                       | Amphi                                                              |      |
| 8h - 10h      | Interacting quantum fields<br>H. Hansen                   | Advanced soft condensed matter<br>D. Bartolo & A. Nicolas    | C/F(*)    | Interacting quantum fields<br>D. Tsimpis                   | Advanced soft condensed matter<br>D. Bartolo & A. Nicolas    | C/27   | Advanced statistical mechanics<br>L. Chevillard & V. Démery        | C     |     | Interacting quantum fields<br>D. Tsimpis                   | Advanced soft condensed matter<br>D. Bartolo & A. Nicolas | C/27 | Path Integrals and applications<br>M. Magro & H. Roussille  | Nonlinear physics and instabilities<br>V. Démery & O. Pierre-Louis | C/F  |
| 10h15 - 12h15 | Colloquium of the Laboratoire de Physique (11h00-12h00)   |                                                              | Condorcet |                                                            |                                                              | C      | Advanced EM and ultrafast optics<br>E. Constant                    |       | G/C | Advanced EM and ultrafast optics<br>E. Constant            |                                                           | C    | Advanced statistical mechanics<br>L. Chevillard & V. Démery |                                                                    | C    |
| 13h30 - 15h30 | Advanced Computational statistical physics<br>R. Everaers | General relativity and cosmology<br>M. Geiller & A. Deandrea | C/F(*)    | Path Integrals and applications<br>M. Magro & H. Roussille |                                                              | C      | Nonlinear physics and instabilities<br>V. Démery & O. Pierre-Louis | C     |     | Advanced EM and ultrafast optics<br>S. Skupin              |                                                           | C    | Adv. Geophysics<br>S. Labrosse (14h00-17h00)                |                                                                    | (**) |
| 15h45 - 17h45 | Advanced Computational statistical physics<br>R. Everaers | General relativity and cosmology<br>M. Geiller & A. Deandrea | C/F(*)    | Advanced Computational statistical physics<br>R. Everaers  | General relativity and cosmology<br>M. Geiller & A. Deandrea | C/(**) | Nonlinear physics and instabilities<br>V. Démery & O. Pierre-Louis | C     |     | Path Integrals and applications<br>M. Magro & H. Roussille |                                                           | C    | Adv. Geophysics<br>S. Labrosse (14h00-17h00)                |                                                                    | (**) |

(\*) Amphi G (au lieu de F) le 01/09

(\*\*) Amphi à préciser

//Semestre 3B: 3/11 - 19/12

Cours: 24h TD: 12h ECTS: 6

|               | Lundi                                                                  |       | Mardi                                                                          |       | Mercredi                                                                |       | Jeudi                                                   |               | Vendredi                                                                       |                                                                  |
|---------------|------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------|-------|---------------------------------------------------------|---------------|--------------------------------------------------------------------------------|------------------------------------------------------------------|
|               | Cours                                                                  | Amphi | Cours                                                                          | Amphi | Cours                                                                   | Amphi | Cours                                                   | Amphi         | Cours                                                                          | Amphi                                                            |
| 8h - 10h      | Advanced fluid mechanics and turbulence<br><b>A. Naso &amp; W. Bos</b> | C     | Computational Quantum Physics<br><b>T. Roscilde &amp; F. Mezzacapo</b>         | (**)  | Particle physics<br><b>I. Laktineh &amp; N. Chanon</b>                  | C     | Advanced aspects of symmetries<br><b>F. Delduc</b>      | C             | Quantum Many-Body Physics<br><b>F. Mezzacapo</b>                               | C                                                                |
| 10h15 - 12h15 | Colloquium of the Laboratoire de Physique (11h00-12h00)                |       | Phase transitions and critical phenomena<br><b>L. Canet &amp; A. Fedorenko</b> | C     | Particle physics<br><b>I. Laktineh &amp; N. Chanon</b>                  | C/027 | Advanced aspects of symmetries<br><b>F. Gieres</b>      | C/14 (ex 009) | Phase transitions and critical phenomena<br><b>L. Canet &amp; A. Fedorenko</b> | C                                                                |
| 13h30 - 15h30 | Biophysics<br><b>F. Montel &amp; A.-F. Bitbol &amp; J. Derr</b>        | C/F   | Quantum Many-Body Physics<br><b>S. Florens</b>                                 | C     | Advanced fluid mechanics and turbulence<br><b>A. Naso &amp; W. Bos</b>  | C/F   | Particle physics<br><b>I. Laktineh &amp; N. Chanon</b>  | C/E           | Phase transitions and critical phenomena<br><b>L. Canet &amp; A. Fedorenko</b> | C/(**)                                                           |
| 15h45 - 17h45 | Biophysics<br><b>F. Montel &amp; A.-F. Bitbol &amp; J. Derr</b>        | C/F   | Quantum Many-Body Physics<br><b>S. Florens</b>                                 | C/F   | Advanced fluid mechanics and turbulence<br><b>A.A Naso &amp; W. Bos</b> | C     | Gauge theories<br><b>H. Samtleben &amp; N. Mahmoudi</b> | C             | Computational Quantum Physics<br><b>T. Roscilde &amp; F. Mezzacapo</b>         | Adv. Geophysics<br><b>S. Labrosse (14h00-17h00)</b><br>(**)/(**) |

(\*\*) Amphi à préciser

**// Master 2 sciences de la matière – parcours Physique: concepts et applications**

**//Semestre 4A: 12/01 - 16/01**

**Thematic School: 1 week ECTS: 3**[illegible]

// Master 2 sciences de la matière – parcours Physique: concepts et applications

//Semestre 4A: 19/01 - 20/02

Cours: 9x2h15=18h ECTS: 3

|                     | Lundi                                                                                      |       | Mardi                                                              |                                                          | Mercredi                                                                      |                                                                             | Jeudi                                                                         |                                                                       | Vendredi                                                              |                                                                        |
|---------------------|--------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|
|                     | Cours                                                                                      | Amphi | Cours                                                              | Amphi                                                    | Cours                                                                         | Amphi                                                                       | Cours                                                                         | Amphi                                                                 | Cours                                                                 | Amphi                                                                  |
| 8h<br>-<br>10h15    | Cours Mathematica                                                                          |       | Cours Mathematica                                                  |                                                          | Topological phases<br><b>D. Carpentier</b><br><br><b>Amphi C</b>              |                                                                             | Topological phases<br><b>D. Carpentier</b><br><br><b>Amphi C</b>              |                                                                       | Cours Mathematica                                                     |                                                                        |
| 10h30<br>-<br>12h45 | Colloquium of the Laboratoire de Physique<br><b>Amphi. Schrödinger</b><br>(11h00-12h00)    |       | Physics for Climate<br><b>J.-L. Dufresne</b><br><br><b>Amphi C</b> | String Theory<br><b>D. Andriot</b><br><br><b>Amphi F</b> | Advanced Granular media<br><b>N. Taberlet</b><br><br><b>Amphi E</b>           | Nuclear and Astronuclear physics<br><b>D. Davesne</b><br><br><b>Amphi C</b> | Large deviations<br><b>V. Lecomte</b><br><br><b>Salle 105</b>                 | Gravitational Wave Physics<br><b>A. Arbey</b><br><br><b>Amphi C</b>   | Advanced Mechanics<br><b>J. Marthelot</b><br><br><b>Amphi E</b>       | Effective field theories<br><b>D. Guadagnoli</b><br><br><b>Amphi C</b> |
| 13h30<br>-<br>15h45 | Introduction to Broken Symmetry in Physics<br><b>B. van Tiggelen</b><br><br><b>Amphi F</b> |       | Physics for Climate<br><b>J.-L. Dufresne</b><br><br><b>Amphi C</b> | String Theory<br><b>D. Andriot</b><br><br><b>Amphi F</b> | Advanced Granular media<br><b>N. Taberlet</b><br><br><b>Amphi E</b>           | Nuclear and Astronuclear physics<br><b>D. Davesne</b><br><br><b>Amphi C</b> | Large deviations<br><b>V. Lecomte</b><br><br><b>Salle 105</b>                 | Gravitational Wave Physics<br><b>A. Arbey</b><br><br><b>Amphi C</b>   | Advanced Mechanics<br><b>J. Marthelot</b><br><br><b>Amphi E</b>       | Effective field theories<br><b>D. Guadagnoli</b><br><br><b>Amphi C</b> |
| 16h00<br>-<br>18h15 | Introduction to Broken Symmetry in Physics<br><b>B. van Tiggelen</b><br><br><b>Amphi F</b> |       | Integrable models<br><b>K. Kozlowski</b><br><br><b>Amphi C</b>     |                                                          | Atmospheric and Oceanic Fluid Dynamics<br><b>C. Herbert</b><br><b>Amphi E</b> | Integrable models<br><b>K. Kozlowski</b><br><br><b>Amphi C</b>              | Atmospheric and Oceanic Fluid Dynamics<br><b>C. Herbert</b><br><b>Amphi C</b> | Quantum Technology & control<br><b>B. Huard</b><br><br><b>Amphi F</b> | Quantum Technology & control<br><b>B. Huard</b><br><br><b>Amphi F</b> |                                                                        |