

## R Programming

|  |                                   |  |  |   |   |                 |  |   |
|--|-----------------------------------|--|--|---|---|-----------------|--|---|
| <b>Code du cours</b><br>Course Code  |                                   |  | <b>Titre du cours</b><br>Course title    |   |   |                 |  |   |
| BAC.EAINA.ISCSE.1<br>800   |                                   |  | R Programming                            |   |   |                 |  |   |
| <b>Crédits</b><br>Credits  |                                   | <b>Période d'enseignement</b><br>Teaching period |  |   |   |                 | <b>Année Académique</b><br>Academic Year |   |
| 6  |                                   | fall, spring                                     |  |   |   |                 | 2022/2023                                |   |
| <b>Charge de travail</b><br>Student workload                                     | <b>Synchrone /</b><br>Synchronous | <b>Asynchrone /</b><br>Asynchronous              | <b>Travail en</b><br>équipe<br>Team work | <b>Activités</b><br>pédagogiques<br>/ Pedagogical<br>activities | <b>Travail</b><br>personnel<br>Personal<br>work | <b>Coaching</b> | <b>Evaluation</b>                        | <b>Charge totale de travail</b><br>Total workload |
|  | 39                                | 0  | 0  | 0   | 0   | 0               | 6  | 45  |
| <b>Programme</b><br>Program  |                                   |  | Global BBA                               |   |   |                 |  |   |
| <b>Discipline</b><br>Discipline  |                                   |  |  |   |   |                 |  |   |
| <b>Module</b>  |                                   |  | -  |   |   |                 |  |   |
| <b>Type de cours</b><br>Course type  |                                   |  | elective                                 |   |   |                 |  |   |
| <b>Campus</b>  |                                   |  | Nanjing, Sophia                          |   |   |                 |  |   |
| <b>Campus partenaire</b>   |                                   |  |  |   |   |                 |  |   |
| <b>Course open to</b><br>students in exchange                                    |                                   |  |  |   |   |                 |  |   |
| <b>Langue</b><br>d'enseignement<br>Teaching language                             |                                   | Anglais / English                                |  |   |   |                 |  |   |
| <b>Responsable du</b><br>cours<br>Course leader                                  |                                   |  | MILLELIRI André                          |   |   |                 |  |   |
| <b>Pré-Requis</b><br>Prerequisite  |                                   |  | -  |   |   |                 |  |   |
| <b>Nom des</b><br>intervenants par<br>campus<br>Instructor(s) names<br>by campus | Belo<br>Horizonte                 |  |  |   |   |                 |  |   |
|  | Lille                             |  |  |   |   |                 |  |   |
|  | Paris                             |  |  |   |   |                 |  |   |
|  | Raleigh                           |  |  |   |   |                 |  |   |
|  | Sophia                            |  |  |   |   |                 |  |   |
|  | Stellenbosch-<br>Le Cap           |  |  |   |   |                 |  |   |
|  | Suzhou                            |  |  |   |   |                 |  |   |
|  | Nanjing                           |  |  |   |   |                 |  |   |

|  |           |  |  |  |
|--|-----------|--|--|--|
|  | Barcelone |  |  |  |
|  | Other     |  |  |  |

|   |  |      |  |
|---|--|------|--|
| <b>Descriptif du cours / Course description</b>   | Students will be introduced to the fundamental concepts of R. They will learn the different data structures and how to create, manipulate and access the relevant information from these data structures. Finally, they will learn to visualize these data in R. Additional topics will also cover advanced data manipulation techniques, geospatial visualization and web scrapping, optimization algorithms (Prerequisite: Calculus I, Calculus II). |      |  |
| <b>Thèmes / Topics</b>  |  |      |  |
| <b>Résultats d'apprentissage / Intended Learning Outcomes and Skills</b>                          | <p><b>A l'issue de la formation, vous serez capable de / As a result of this module, you will be able to:</b></p> <p><b>Connaissances / Knowledge and Understanding (subject specific)</b></p> <p><b>Aptitudes cognitives / Cognitive skills</b></p> <p><b>Attitudes / Key transferable skills</b></p> <p><b>Ethical and social understanding</b></p>  |      |  |
| <b>Contribution aux objectifs pédagogiques du programme / Contribution to learning objectives</b> | Indiquer les learning objectives auxquels contribue le cours (en se basant sur le curriculum mapping du programme) / Indicate which learning objectives the course contributes to (based on the program curriculum mapping)  |      |  |
|   | Cours soumis à évaluation dans le cadre de l'Assurance of Learning pour l'année en cours ? Non / No  |      |  |
| <b>Evaluation des étudiants / Student Assessment</b>  | <b>Evaluation finale (DS) / Final examination</b>  | 100% |  |
|   | (Précisez la nature pour l'évaluation finale / Explain type for final examination)   |      |  |
|   | Cliquez ici pour entrer du texte.  |      |  |
|   | QCM - Quiz:  |      |  |
|   | Epreuve sur table - Supervised exam:   |      |  |
|   | Présentation orale - Presentation:   |      |  |
|   | Rapport écrit/Dissertation - Report / Dissertation:  |      |  |
|   | Participation - Class participation:   |      |  |
|   | <b>Autre, précisez / Other, precise:</b>   |      |  |
|   | <b>Contrôle continu / Continuous Assessment</b>  | 0%   |  |

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|--|---|-----------------|
|  | préciser nature / Explain type  |                 |
|  | Cliquez ici pour entrer du texte.<br>QCM - Quiz:<br>Epreuve sur table - Supervised exam:<br>Présentation orale - Presentation:<br>Rapport écrit/Dissertation - Report / Dissertation:<br>Participation - Class participation:<br><br><b>Autre, précisez / Other, precise:</b> | Nb midterms : 0 |
| <b>Méthodes d'enseignement</b><br>Teaching Methods   | <b>Format de cours / Course format</b>  |                 |
|  | <b>Autre, précisez / Other, precise:</b>  |                 |
|  | <b>Activités d'apprentissage / Learning activities</b>  |                 |
| <b>Plan de cours</b><br>Course Plan                  |   |                 |
| <b>Référence Académique / Academic reference</b>     |   |                 |
| <b>Site(s) web / Web site(s)</b>                     |   |                 |
| <b>Licence(s) informatique(s)/ Computer licenses</b> |   |                 |

|                                      | Modalités de délivrance du cours (par campus si différent)<br>Course delivery modes (per campus if different) |  |   |                           |   |   |
|--------------------------------------|---|--|---|---------------------------|---|---|
| Nombre CM Amphi / Number of Lectures | Durée CM Amphi (en heures) / Lecture duration (in hours)  | Nombre TD / Number of Tutorial classes | Durée TD (en heures) / Tutorial class duration (in hours) | Asynchrone / Asynchronous | Autres (Distance learning, etc...) (en heures) / Other (in hours) | Préciser les spécificités de programmation (TD journée, cadencement spécifique des séances) / Specify if full-day tutorial class, different schedules |
| Campus                               |   |  |   |                           |   |   |
| 0                                    | 0   | 0                                      | 0   | 0                         | 0   |   |
|                                      |   |  |   |                           |   |   |
|                                      |   |  |   |                           |   |   |
|                                      |   |  |   |                           |   |   |