<table>
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<th>Code and link to the course description in Oodi</th>
<th>Course name and ECST Credits</th>
<th>Preferred timing</th>
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**Obligatory Studies (60 ECTS credits)**

- **747618S**: Protein production and analysis 10 ECTS cr, 1st autumn 10
- **747616S**: Biochemical methodologies II, 10 ECTS cr, 1st autumn 5 5
- **744624S**: Orientation to Research Work and/or 5 5 5
- **744629S**: Orientation to Biochemical Work, Total 10-20 ECTS cr 1st autumn 5 5
- **744691S**: MSc thesis (Pro gradu) 30 ECTS cr 10 5 15
- **744692S**: MSc thesis, additional experimental work (0-30 ECTS, in 5 ECTS blocks) 15 10
- **740672S**: Maturity test (M.Sc. degree), 0 ECTS cr

**Optional Studies (a minimum of 3 of these courses must be taken)**

- **747617S**: Biochemistry and biotechnology of protein folding 5 ECTS cr, spring 5
- **744630S**: Systems biology 5 ECTS cr, spring 5
- **747615S**: Introduction to structure-based drug discovery 5 ECTS cr, spring
- **747614S**: Macromolecular x-ray crystallography, 5 ECTS, autumn 5
- **747613S**: In silico methodologies in biochemistry and molecular medicine 5 ECTS cr, spring 5

**Other Optional studies**

- **744631S**: Dissertation 15 ECTS cr
- **744625S**: Scientific presentation 1-2 ECTS cr
- **747694S**: Final examination in protein science and biotechnology 10 ECTS cr
- **74632S**: Yeast genetics 5 ECTS cr, spring 5
- **902154Y**: Scientific communication for biochemists, 5 ECTS, spring
- **740381A**: Biochemical and biomedical Innovation, 2-5 ECTS cr
- **030008P**: Information Skills for foreign degree students 1 ECTS cr (Science and Technology library Tellus)
- **488321S**: Bioreactor technology (Bioprocess Engineering Laboratory) 5 ECTS cr, autumn
- **488305S**: Advanced course for biotechnology (Bioprocess Engineering Laboratory), 5 ECTS cr, spring 5
- **040911S**: Using animal in research – carrying out procedures (Laboratory Animal Centre) 3 ECTS cr, spring (probably course is not organized every year in English)

**Minor in Entrepreneurship 25 credits**

- **724811A**: Entrepreneuring for Tomorrow, 5 ECTS cr, yr1-yr2
- **724812A**: Building Change Through Entrepreneurship, 5 ECTS cr, yr1-yr2
- **724813A**: Entrepreneurship in Action, 5 ECTS cr, yr1-yr2
- **724814A**: Introduction to Business Development, 5 ECTS cr, yr1-yr2
- **724815A**: Entrepreneurial Assignment, 5 ECTS cr, yr1-yr2
- **724816A**: Building Business Through Creativity and Collaboration, 5 ECTS cr, yr1-yr2

**Optional courses at any university**
Other suitable courses taught at any university (for minimum 120 credits of MSc Degree) will be accepted as optional studies. Courses given in research units eg. Biocenter Oulu will be accepted. Courses must be connected to biochemistry or logically support some aspect of it and they will have to be at an appropriate level. The content of the courses must not be too similar to other courses which have counted towards the students BSc degree or towards their MSc. In all cases Academic Officer Jari Heikkinen should be contacted to confirm acceptance / suitability. We would advise that this is done before the course is taken, especially in the case of courses taken from universities outside Finland.

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