Specialisation: Molecules and Organic Materials

Profile: Soft Matter

<table>
<tr><td rowspan="2">Legend</td><td>Compulsory Courses Specialization</td><td>Profile Courses</td><td>Electives</td><td>Electives non CSE</td></tr>
<tr><td>Deficiency Courses</td><td></td><td></td><td></td></tr>
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<table>
<tr><td colspan="5">Year 1</td></tr>
<tr><td rowspan="3">Compulsory Courses Specialization</td><td>Quarter 1A</td><td>Quarter 1B</td><td>Quarter 2A</td><td>Quarter 2B</td></tr>
<tr><td>Supramolecular Chemistry
(5 EC, Huskens)</td><td>Statistical Thermo
(2,5 EC, de Beer)</td><td>Project Organic Materials
(5 EC, Hempenius)</td><td></td></tr>
<tr><td>Characterization
(5 EC, Huijser)</td><td>Organic Materials & Polymer Science
(5 EC, Wurm)</td><td>Physical Organic Chemistry (2,5 EC, Huskens)</td><td></td></tr>
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<tr><td colspan="5">Year 1</td></tr>
<tr><td rowspan="2">Profile Courses</td><td>Quarter 1A</td><td>Quarter 1B</td><td>Quarter 2A</td><td>Quarter 2B</td></tr>
<tr><td>Advanced Colloids and Interfaces (5 EC, Wood)</td><td></td><td>Soft Matter Physics
(5 EC, Vutukuri)</td><td>Experiments in Soft Matter
(5 EC; De Beer)</td></tr>
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<table>
<tr><td colspan="5">Year 1</td></tr>
<tr><td rowspan="8">Electives scheduled</td><td>Quarter 1A</td><td>Quarter 1B</td><td>Quarter 2A</td><td>Quarter 2B</td></tr>
<tr><td>Advanced Catalysis
(5 EC, Lefferts/Mul)</td><td>Electrochemistry: fundamentals and techniques
(5 EC, Altomare)</td><td>Polymer Physics
(5 EC, de Beer)</td><td>Polymer Synthesis
(5 EC, Wurm)</td></tr>
<tr><td></td><td>Advanced Molecular Separations
(5 EC, de Vos/Schuur)</td><td>Advanced Organic Chemistry
(5 EC, Jonkheijm)</td><td>Electrocatalysis: Materials and Spectroscopy
(5 EC; Katsoukis)</td></tr>
<tr><td></td><td rowspan="2">Lab on a chip
(5 EC, Berendsen)</td><td colspan="2">Elastomer Science & Engineering
(5 EC, Blume)</td></tr>
<tr><td></td><td>Advanced Ceramics
(5 EC, Pizzoccaro-Zilmay)</td><td>Biochemistry
(5 EC, Bansal)</td></tr>
<tr><td></td><td>Advanced Drug Delivery and Nanomedicine
(5 EC, Prakash)</td><td>Inorganic Materials Science
(5 EC; Baeumer)</td><td>X-ray Characterisation for S&T
(5 EC, Makhotkin)</td></tr>
<tr><td></td><td>Biomedical Materials Engineering
(5 EC, Grijpma/Poot)</td><td colspan="2">Sustainable Nanotechnology
(5 EC; Susarrey Arce)</td></tr>
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<tr><td colspan="5">Year 1</td></tr>
<tr><td rowspan="6">2,5 EC Topics</td><td>Quarter 1A</td><td>Quarter 1B</td><td>Quarter 2A</td><td>Quarter 2B</td></tr>
<tr><td>Systems Chemistry
(Wong)</td><td>Ion Transport in Fluids
(Wood e.a.)</td><td>Chemical Process Analysis
(Susarrey Arce)</td><td>Membrane Materials
(Lammertink/De Vos/Benes)</td></tr>
<tr><td></td><td>Design and simulation of chemical batch processes (Franke)</td><td>Electrochemical Engineering
(Banerjee)</td><td>Molecular Modelling
(De Beer)</td></tr>
<tr><td></td><td>Nano and Surface Chemistry
(Nijhuis)</td><td>Advanced Reaction Kinetics
(Faria)</td><td>Membrane Processes
(Lammertink/De Vos/Benes)</td></tr>
<tr><td></td><td></td><td>Nanochemistry
(Wong)</td><td></td></tr>
<tr><td></td><td></td><td>Physical Organic Chemistry
(Huskens)</td><td></td></tr>
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<tr><td colspan="5">Year 1</td></tr>
<tr><td rowspan="5">Electives n.s.</td><td>Quarter 1A</td><td>Quarter 1B</td><td>Quarter 2A</td><td>Quarter 2B</td></tr>
<tr><td colspan="4">Theory of Phase Equilibria (5 EC; van der Hoef)</td></tr>
<tr><td colspan="4">Polymers & Material Science Practice (3 EC; Hempenius)</td></tr>
<tr><td colspan="4">Capita Selecta Research Group (5 EC)</td></tr>
<tr><td colspan="4">Contract Research (5 EC)</td></tr>
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<tr><td colspan="5">Year 1</td></tr>
<tr><td rowspan="4">Deficiency</td><td>Quarter 1A</td><td>Quarter 1B</td><td>Quarter 2A</td><td>Quarter 2B</td></tr>
<tr><td>Workshop Aca. Skills
(0,5 EC)</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Matlab for PM CSE*
(2,5 EC)</td><td></td><td></td></tr>
<tr><td>Math for Engineers
(0 EC, optional)</td><td></td><td></td><td></td></tr>
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* Matlab for PM CSE (202400599) replaces Matlab voor pre-masters ET (202001390)