

Course Schedule SCIN381 Aroma and Flavor Science for Innovation and Bio-Business

Morning session 10:00-12:00 hr, Afternoon session 13:00-16:00 hr

Week	Topic (Morning session)	Topic (Afternoon session)	Instructor
1 Jan 18, 2021	<b>Lecture (online)</b> <ul style="list-style-type: none"> <li>● Application and innovation of flavor and fragrance: From antiquity to modern industries</li> <li>● Perceptions of aroma and flavor</li> </ul>	<b>Laboratory (online)</b> <ul style="list-style-type: none"> <li>● Laboratory orientation</li> <li>● Assignment briefing</li> </ul>	Sittiwat
2 Jan 25, 2021	<b>Lecture (online)</b> <ul style="list-style-type: none"> <li>● Neurosciences and molecular sensory of aroma and flavor</li> <li>● Anosmia and its pathobiology</li> </ul>	<b>Lecture (online)</b> <ul style="list-style-type: none"> <li>● Genesis of flavors in foods</li> <li>● Flavor interactions with food components and their release</li> </ul>	Patompon Sittiwat
3 Feb 1, 2021	<b>Lecture (online)</b> <ul style="list-style-type: none"> <li>● Flavoring ingredients: manufacture and their stability</li> <li>● Flavor creation and compounding</li> </ul>	<b>Lecture (online)</b> <ul style="list-style-type: none"> <li>● Aroma and scent: Chemistry, manufacture and their stability</li> </ul>	Sittiwat
4 Feb 8, 2021	<b>Laboratory (onsite)</b> <ul style="list-style-type: none"> <li>● Perceptions of aroma and flavor</li> <li>● Threshold</li> </ul>	<b>Laboratory (onsite)</b> <ul style="list-style-type: none"> <li>● The Maillard reaction</li> <li>● Lipid oxidation</li> <li>● Flavor formation in vegetables</li> </ul>	Sittiwat
5 Feb 15, 2021	<b>Lecture (online/onsite)</b> Application of flavors in foods I	<b>Lecture (online/onsite)</b> Application of flavors in foods II	Siryupa
6 Feb 22, 2021	<b>Laboratory (onsite)</b> Application of flavors in foods I	<b>Laboratory (onsite)</b> Application of flavors in foods II	Siryupa
7 Mar 1, 2021	<b>Lecture (online/onsite)</b> Aroma and scent: Raw material plants	<b>Laboratory (onsite)</b> Aroma and scent: Raw material plants	Kanyaratt
8 Mar 8, 2021	<b>Lecture (online/onsite)</b> <ul style="list-style-type: none"> <li>● Psychological basis of perfumery</li> <li>● Application of fragrances in cosmetics and personal care products</li> </ul>	<b>Laboratory (onsite)</b> <ul style="list-style-type: none"> <li>● Steam distillations and extraction</li> <li>● Sniffing perfumes</li> </ul>	Invited instructor (Lec) Sittiwat (Lab)

Week	Topic (Morning session)	Topic (Afternoon session)	Instructor
9	Midterm examination (Mar 15-19, 2021)		
10 Mar 22, 2021	Lecture (online/onsite) Phenomena of mass transfer	Laboratory (onsite) Phenomena of mass transfer	Thitisilp
11 Mar 29, 2021	Lecture (online/onsite) Mass transfer of chemical compounds related to aroma and flavor during application and in finished goods	Laboratory (onsite) Mass transfer of chemical compounds related to aroma and flavor during application and in finished goods	Thitisilp
12 Apr 5, 2021	Lecture (online/onsite) Aromatherapy	Laboratory (onsite) <ul style="list-style-type: none"> <li>● Sniffing aromatherapy products</li> <li>● Flavor compounding</li> </ul>	Nattinee J Sittiwat (Lab)
Apr 12, 2021	No class (Songkran Festival)		
13 Apr 19, 2021	Lecture (online/onsite) Flavor/aroma profiling: Instrumental and sensory descriptive analyses	Laboratory (onsite) <ul style="list-style-type: none"> <li>● Sensory descriptive analysis</li> </ul>	Sittiwat
14 Apr 26, 2021	Lecture (online/onsite) Packaging materials enhancing stability of aroma and flavor in finished goods	Laboratory (onsite) Packaging materials enhancing stability of aroma and flavor in finished goods	Siriyupa
15 May 3, 2021	Lecture (online/onsite) Regulation for industrial application in flavor and fragrance	<ul style="list-style-type: none"> <li>● Wrap up</li> <li>● Presentation for assignment</li> </ul>	Invited instructor (Lec) Sittiwat
16	Final examination (May 10-21, 2021)		