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# University of Pretoria Yearbook 2019

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## Advanced animal and plant foods microbiology 362 (FST 362)

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| <b>Qualification</b>          | Undergraduate  |
| <b>Faculty</b>                | <a href="#">Faculty of Natural and Agricultural Sciences</a>         |
| <b>Module credits</b>         | 18.00  |
| <b>Programmes</b>             | <a href="#">BSc Food Science</a><br><a href="#">BSc Microbiology</a> |
| <b>Prerequisites</b>          | FST 260, MBY 251, MBY 261, MBY 262                                   |
| <b>Contact time</b>           | 2 lectures per week, 180 minute practical per week                   |
| <b>Language of tuition</b>    | Module is presented in English                                       |
| <b>Department</b>             | Consumer and Food Sciences   |
| <b>Period of presentation</b> | Semester 1   |

### Module content

With an integrated focus on animal and plant food commodities, this module considers food properties and processing operations that impact on the growth, survival and biochemical activity of microorganisms as they relate to spoilage, safety and fermentation. Temperature effects on microbial growth and survival including thermal destruction and cell and spore injury. Microbial stress response (adaptation) during processing. Selection for stress resistant and more virulent pathogenic variants and virulence mechanisms (toxin structure/function) of food-borne pathogens during food processing. Theory and practice of new advances in microbial detection and identification methods. Tools for the production of safe foods including food safety objectives (FSOs) and risk analysis. Practicals will include advanced microbial detection and identification methods applied to animal and plant foods as well as the food supply chain.

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