Biomedical Engineering Program

Prince of Songkla University

Doctoral Degree

Program title: Doctor of Philosophy in Biomedical Engineering

Course requirements

Course	Plan 1.1	Plan 2	
		Plan 2.1	Plan 2.2
Core	-	7	7
Elective	-	3	15
Seminar	6*	2+6*	2+10*
Thesis	48	36	48
Minimum total required credit	**48**	**48**	**72**

* Audit only

Plan

Plan 1.1 For applicant with a master degree: Total 48 credits of thesis

	1st Semester	Credits	2nd Semester	Credits
1st year	374-513 Ph.D. Special Seminar 1	1*	374-513 Ph.D. Special Seminar 1	1*
	374-683 Thesis	8	374-683 Thesis	8
2nd year	374-513 Ph.D. Special Seminar 1	1*	374-513 Ph.D. Special Seminar 1	1*
	374-683 Thesis	8	374-683 Thesis	8
3rd year	374-513 Ph.D. Special Seminar 1	1*	374-513 Ph.D. Special Seminar 1	1*
	374-683 Thesis	8	374-683 Thesis	8

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Plan 2.1 For applicant with a master degree: 12 credits of course works and 36 credits of thesis

	1st Semester	Credits	2nd Semester	Credits
1st year	374-501 Biomedical Engineering I	2	374-503 Biomedical Engineering III	2
	374-502 Biomedical Engineering II	2	374-504 Research Skills and Ethic in Biomedical Engineering	1
	374-510 Seminar I	1	374-511 Seminar II	1
	374-513 Ph.D. Special Seminar I	1*	374-513 Ph.D. Special Seminar I	1*
	Elective Courses	3	374-685 Thesis	4
	Total	**8**	**Total**	**8**
	1st Semester	**Credits**	**2nd Semester**	**Credits**
2nd year	374-513 Ph.D. Special Seminar I	1*	374-513 Ph.D. Special Seminar I	1*
	374-685 Thesis	8	374-685 Thesis	8
	Total	**8**	**Total**	**8**
	1st Semester	**Credits**	**2nd Semester**	**Credits**
3rd year	374-513 Ph.D. Special Seminar I	1*	374-513 Ph.D. Special Seminar I	1*
	374-685 Thesis	8	374-685 Thesis	8
	Total	**8**	**Total**	**8**

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Plan 2.2 For applicant with a bachelor degree: 24 credits of course works and 48 credits of thesis

	1st Semester	Credits	2nd Semester	Credits
1st year	374-501 Biomedical Engineering I	2	374-503 Biomedical Engineering III	2
	374-502 Biomedical Engineering II	2	374-504 Research Skills and Ethic in Biomedical Engineering	1
	374-510 Seminar I	1	374-511 Seminar II	1
	374-514 Ph.D. Special Seminar 2	1*	374-514 Ph.D. Special Seminar 2	1*
	Elective courses	3	Elective courses	3
			374-686 Thesis	3
	Total	**8**	**Total**	**10**
2nd year	**1st Semester**	**Credits**	**2nd Semester**	**Credits**

	374-514 Ph.D. Special Seminar 2	1*	374-514 Ph.D. Special Seminar 2	1*
	Elective courses	3	Elective courses	3
	374-686 Thesis	5	374-686 Thesis	5
	Total	**8**	**Total**	**8**
3rd year	**1st Semester**	**Credits**	**2nd Semester**	**Credits**
	374-514 Ph.D. Special Seminar 2	1*	374-514 Ph.D. Special Seminar 2	1*
	Elective subject	3	374-686 Thesis	6
	374-686 Thesis	6		
	Total	**9**	**Total**	**6**
4th year	**1st Semester**	**Credits**	**2nd Semester**	**Credits**
	374-514 Ph.D. Special Seminar 2	1*	374-514 Ph.D. Special Seminar 2	1*
	374-686 Thesis	6	374-686 Thesis	6
	Total	**6**	**Total**	**6**
5th year	**1st Semester**	**Credits**	**2nd Semester**	**Credits**
	374-514 Ph.D. Special Seminar 2	**1***	374-514 Ph.D. Special Seminar 2	1*
	374-686 Thesis	6	374-686 Thesis	5
	Total	**6**	**Total**	**5**

*Audit only

Coursework

Core courses

374-501	Biomedical Engineering I	2 ((1)-2-3)
374-502	Biomedical Engineering II	2 ((1)-2-3)
374-503	Biomedical Engineering III	2 ((1)-2-3)
374-504	Research Skills and Ethic in Biomedical Engineering	1 (0-2-1)

Elective courses

374-520	Numerical Methods in Biomedical Engineering	2 ((1)-2-3)
374-521	Biomechanics	3 ((3)-0-6)
374-530	Research Techniques in Cellular and Molecular Biology	2 ((1)-2-3)
374-531	Molecular Medicine: Diagnostics and Therapies	2 ((1)-2-3)
374-540	Biomimetic Approach in Medical Applications	3 ((3)-0-6)
374-541	Stem Cell and Tissue Engineering	3 ((3)-0-6)
374-542	Biomedical Materials	3 ((3)-0-6)
374-550	Microfluidic System	3 ((2)-2-5)
374-551	Nanomedicine: Molecular and Engineering Aspects	2 ((2)-0-4)
374-552	Biosensors for Biomedical Engineering	3 ((3)-0-6)
374-560	Biomedical Signal Processing	2 ((1)-2-3)
374-561	Computational Medical Informatics	2 ((1)-2-3)
374-562	Medical Image Analysis	2 ((1)-2-3))
374-563	Artificial Intelligence	2 ((1)-2-3)
374-570	Biomedical Engineering Entrepreneurship	2 ((2)-0-4)
374-571	Innovative Design for Medicine and Healthcare	2 ((1)-2-3)
374-590	Special Topics in Biomedical Engineering I	2 ((1)-2-3)
374-591	Special Topics in Biomedical Engineering II	2 ((1)-2-3)
374-592	Special Topics in Biomedical Engineering III	2 ((1)-2-3)

374-593 Special Topics in Biomedical Engineering IV	2 ((1)-2-3)
374-594 Special Topics in Biomedical Engineering V	2 ((1)-2-3)
374-620 Cardiovascular Engineering	2 ((2)-0-4)
374-621 Advanced Biomechanics	2 ((2)-0-4)
374-640 Polymeric Biomaterials	3 ((3)-0-6)
374-641 Matrix Engineering and Scaffold Technology	3 ((3)-0-6)
374-642 Design of Medical Devices and Implants	2 ((2)-0-4)
374-650 Healthcare Technology	3 ((3)-0-6)
374-690 Module: Integrative Research Innovation and Technology for Medicine	5 ((4)-2-9)

Seminar courses

374-510 Seminar I	1 (0-2-1)
374-511 Seminar II	1 (0-2-1)
374-513 Ph.D. Special Seminar 1	6 (0-12-6)*
374-514 Ph.D. Special Seminar 2	10 (0-20-10)*

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Thesis

Plan 1.1	
374-683 Thesis	48 (0-144-0)
Plan 2.1	
374-685 Thesis	36 (0-108-0)
Plan 2.2	
374-686 Thesis	48 (0-144-0)