FACULTY OF COMPUTING & INFORMATION TECHNOLOGY
KING ABDULAZIZ UNIVERSITY

FCIT
KAU

كلية الحاسبات وتقنية المعلومات
جامعة الملك عبدالعزيز

GRADUATE STUDENT HANDBOOK
PHD IN INFORMATION SYSTEMS

Faculty of Computing and Information Technology

Version 5

Table of Contents

GRADUATE STUDENT HANDBOOK

The Graduate Student Handbook is designed by the Committee for Academic Affairs for Graduate Studies (AAG) in the Information Systems (IS) Department as an authentic resource to facilitate students' journey during their study period at the IS department in the Faculty of Computing and IT, FCIT. This handbook provides valuable information to assist students and offers a list of rules and procedures to be followed in performing academic activities.

The handbook is produced to navigate students confidently and legitimately in the IS department to understand the environment and student life, follow department/faculty policies, and ultimately graduate on time. Keeping in mind that this handbook does not replace the university policies and procedures

For any inquiries or emergencies, contact us at:
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ACADEMIC CALENDAR 2024-2025

Please **click here** for an updated academic year's academic calendar.

WELCOME MESSAGE

THE HEAD OF IS DEPARTMENT

Welcome!

We are pleased to welcome our new and continuing students. We wish you all success at every step during the study period. We hope you will enjoy your stay at the IS department, Faculty of Computing and Information Technology (FCIT), with the high-quality educational environment and fully equipped technical facilities provided at the premises. As educators, we have hired highly qualified faculties and implemented modern laboratories and classrooms. Now, it is your turn to avail all available opportunities in this competitive environment. As a computing faculty, our ambition is to provide students with superior, cutting-edge theoretical and practical skills required to excel in all areas related to information systems. Suggested ideas for research have been categorized under different themes and specialist faculty members.

This Graduate Handbook is published to help and support you. It summarizes the detailed list of academic processes, rules, procedures and other useful information regarding campus academic life. All existing and new students are therefore requested to familiarize themselves with rules and regulations to avoid unnecessary delays in their progress.

In final words, we want to say thanks to all faculties and administrative staff who helped us in preparing this handbook. We deeply thank them for their efforts and help and wish all the students best of luck for their studies and future endeavors.

Information Systems Department: Vision and Mission

Information Systems Department

The Department of Information Systems (IS) was established as one of three departments of Faculty of Computing and IT in the year 2006 with an objective to produce specialists in the integration of Information Systems solutions with business operations to serve organizations with their requirements of information technologies and to enable them to accomplish their goals and support them in the process of decision-making. The philosophy of the IS Department is based upon providing students with a strong theoretical foundation in information systems complemented with an understanding of business principles and practices which are then enhanced through practical application focused on identifying and solving real-world business problems.

Vision

To be recognized as the preeminent information systems department in the region, known for its scientific and practical innovations, and commitment in delivering high-quality education, market-responsive research, and services.

Mission

To provide students with superior, cutting-edge educational experiences, and essential practical skills required to excel in all areas related to information systems.

Department's Academic Administration

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Academic Overview

About the Program

The PhD program in Computer Information Systems has become essential to the operation of almost every organization in this modern age. With its mix of computing, database, information systems, and business flavor, students getting the highest degree in this field will always give them a competitive advantage globally. This degree aims to provide students with academic knowledge in the field of computing information systems. The program covers all significant aspects of information systems, teaching enormous, advanced tools such as big data analytics, cyber security, decision support systems, and applied e-systems, as well as the capability of analyzing data using quantitative analysis. The program is designed to develop researchers who understand fundamental knowledge and applied research methods and can collaborate with researchers worldwide in different disciplines. The medium of instruction and communication in the PhD program is English language.

Program Goals:

Our PhD Program in IS has three main goals. These are as follows.

1. To advance research in Information Systems and its intersection with other disciplines globally.
2. To provide graduate students with the comprehensive knowledge, skills, and ethical grounding necessary to develop and articulate innovative solutions within various Information Systems sub-disciplines.
3. To develop and integrate advanced professional skills in Information Systems to meet industry needs and tackle societal challenges through innovative solutions.

Semester and Course Requirements

The PhD in information systems is a minimum of three years and a maximum of five years degree program. To get the PhD degree, the students must complete 38 credit hours, with the distribution shown in Table 1. Moreover, to complete the number of required credit hours, they can take six to ten semesters, as shown in Table 2. The lists of compulsory courses, elective courses, and thesis requirements are shown in Tables 3, 4, and 5, respectively.

Table 1: Types of Courses and Credit Hours

Courses	Credit Hours
Core courses	12
Elective courses (Within the Department)	6
Thesis	20
Total	**38**

Table 2: Semester Requirements

Courses	No of Semesters
Minimum Number of Semesters	6
Maximum Number of Semesters	10
Possibility of extension after Maximum Semesters	2

Table 3: Compulsory Courses (General Courses)

CODE NO	COURSE NAME	Credit Hours	
		TH.	CR.
CPIS 701	Quantitative Analysis	3	**3**
CPIS 702	Big Data Systems and Knowledge Management	3	**3**
CPIS 703	Intelligent Information Systems and Decision Support	3	**3**
CPIS 704	Applied E-Systems and Pervasive Computing	3	**3**
	TOTAL CREDIT HOURS	12	**12**

Table 4: Elective Courses (Students can select two courses from the list)

CODE NO	COURSE NAME	Pre-Requisite Courses	Credit Hours	
			TH.	CR.
CPIS 720	Cloud and Virtualization Security	**CPIS 704**	3	**3**
CPIS 721	Cyber Information Security & Computer Forensics	**CPIS 720**	3	**3**
CPIS 722	Advanced Decision Support Systems	**CPIS 703**	3	**3**
CPIS 731	Advanced Enterprise Resource Planning	**CPIS 702**	3	**3**
CPIS 733	IS Project & Quality Management	**CPIS 731**	3	**3**
CPIS 735	Information Strategies and Policies	**CPIS 702**	3	**3**
CPIS 737	Enterprise Modeling & Simulation Systems	**CPIS 701**	3	**3**
CPIS 739	IS Change Management	**CPIS 702**	3	**3**
CPIS 741	Data Warehouses and Knowledge Discovery	**CPIS 702**	3	**3**
CPIS 743	Organization Knowledge Management	**CPIS 702**	3	**3**

CPIS 751	Advanced Systems Analysis and Design	**CPIS 704**	3	**3**
CPIS 753	Software Metrics and Economics	**CPIS 704**	3	**3**
CPIS 761	Cognitive Sciences in IS Applications	**CPIS 704**	3	**3**
CPIS 763	Data Visualization	**CPIS 701**	3	**3**
CPIS 771	Topics in networking	**None**	3	**3**
CPIS 781	Virtual Reality	**CPIS 704**	3	**3**
CPIS 791	Bioinformatics	**CPIS 701 + CPIS 704**	3	**3**
CPIS 795	Research Seminar	**None**	3	**3**
CPIS 796	Selected Topics	**None**	3	**3**
	TOTAL CREDIT HOURS		6	**6**

Table 5: Thesis Requirement

CODE NO	COURSE NAME	Credit Hours	
		TH.	CR.
CPIS 799	THESIS	20	**20**
	TOTAL CREDIT HOURS	20	**20**

Taught Courses and Common Degree Plan

Recommended Course plan

As a reference, successful completion of PhD in four years, the students should take their courses as recommended in Table 6 below.

Table 6: Semester wise Recommended Courses and Actions

Year #	Semester #	Recommended Courses	Actions to take
1	1	3 Compulsory Courses	
	2	1 Compulsory Course + 2 Elective Course	Engage with a PhD Supervisor; start working on a PhD thesis proposal.
2	3		Research Work
	4		Research Work

3	5		Research Work
	6		Research Work
4	7		Research Work
	8		Research Work
5	9		Research Work
	10		Research Work

Course Description for All Courses

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS701	**Quantitative Analysis**	3 Units	
Course Description	Quantitative analysis deals with data analysis in a statistical manner. Most researches require such methods in analyzing their results. This course discusses advanced statistical methods such as: Probability, Random Variables, Expectation, Distribution Functions of Random Variables, Sampling distributions, Estimation, Hypothesis Testing, Correlation and regression, Analysis of Experiments, simulation and simulation techniques.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS702	**Big Data Systems and Knowledge Management**	3 Units	
Course Description	It discusses advanced topics in data modeling and database design, especially OODB and distributed DB systems. It emphasizes the concepts of OODB, implementations, current research. It also discusses the architectural models for distributed database systems (DDBS). In addition, it discusses several other advanced database systems, such as deductive, active, temporal, spatial database systems. Transaction management (in particular concurrency control), distributed reliability protocols, parallel database systems, Big data systems, mining databases …etc, are among the topics to discuss.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS 703	**Intelligent Information Systems and Decision Support**	3 Units	

Course Description	This course discusses topics in intelligent systems at the application level, technology level, and development level: Knowledge acquisition, Knowledge representation, and knowledge Base systems, expert systems, Heuristics, Inference engines, certainty analysis. AI techniques: search, predicate logic, rules and production systems. Advanced AI techniques: fuzzy logic, Artificial Neural net, genetic algorithms, Intelligent agents, Artificial Neural networks, and Machine learning, cognitive science. Pattern matching and applications: Natural language processing and natural language interfaces, Speech recognition, Image processing. Intelligent Information Systems Applications in: e-business, e-Learning, pervasive and ubiquitous systems. Robotics. Virtual Reality. DSS techniques. Computational models.

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS 704	**Applied e-Systems and Pervasive Computing**	3 Units	
Course Description	Pervasive and Ubiquitous Systems, Mobile Services, Mobile Business, Workflow and Collaborative Work, Multimedia, Internet, Intranets, and Extranet, E-Business and e-commerce, Web technology and Languages, WWW and the Value Chain, Customer Relationship Management, Data and Transaction Security, Consumer Relationship Marketing, Trans-border EDI and Data Flows, Virtual Organizations, Knowledge Management, Global Cultural Implications for IS, Applied information systems: Hospital IS, Geographic IS, Bio-Informatics systems		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS720	**Cloud and Virtualization Security**	3 Units	CPIS 704
Course Description	An introduction to the concepts and techniques of implementing and securing cloud computing through the use of virtualization and distributed data processing and storage. Topics include operating system virtualization, distributed network storage, distributed computing, cloud models (IAAS, PAAS, and SAAS), and techniques for securing cloud and virtual systems		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS721	**Cyber Information Security & Computer Forensics**	3 Units	CPIS 720

Course Description	Network Management and Computer Security, Information System Security, Databases and security, Criminal Law (or Criminal Justice), Information Assurance & Security, Computer Forensics, Network Forensics, Encryption/decryption techniques, Watermarking, PKI Infrastructure, Smart credit cards security, Authentication techniques: fingerprints, face recognition, …. etc.

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS722	**Advanced Decision Support Systems**	3 Units	CPIS 703
Course Description	This course examines concepts of decision support in both automated and non-automated DSS environments. The focus is on application of decision theory, analytical modeling, and simulation techniques to solve organizational problems. Group decision support systems, executive information systems, and expert systems are also discussed.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS731	**Advanced Enterprise Resource Planning**	3 Units	CPIS 702
Course Description	This course provides a technical overview of Enterprise Resource Planning Systems and their impact on organizations. Known Systems, such as SAP and Oracle Financials will be used to illustrate the concepts, fundamentals, framework, general information technology context, the technological infrastructure, and integration of business enterprise-wide applications.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS733	**IS Project & Quality Management**	3 Units	CPIS 731
Course Description	The aim of this course is to assure the significance of the concept of quality during the process of developing software. It emphasizes on the basic concepts of software quality models all over the software development process. It introduces quality standard systems used in the field of software industry and Information Systems such as: TQM, ISO, CMM, and IEEE standards in order to assure complying with standard criteria during the process of software production, while ensuring continuous development.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS735	**Information Systems Strategies & Policies**	3 Units	CPIS 702
Course Description	It discusses strategic management and deployment of information systems and technologies (ISTs) to improve business competitiveness. Examines the role of IST strategy in enabling companies to effectively manage in the turbulent and dynamic business environments brought about by the Internet. Analyzes new business opportunities in e-commerce brought about by ISTs, including the organizational redesign that these technologies require. Considers implementation and change management issues related to IST deployment in the new environment. Focuses on drawing lessons from the experiences of leading companies that are deploying ISTs to define and support their e-commerce strategies.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS737	**Enterprise Modeling & Simulation Systems**	3 Units	CPIS 701
Course Description	It presents mathematical foundation for modeling and computer simulation and comprehensive framework for modeling and simulation integrating the various simulation approaches. It covers model formulation, simulation model execution, and the model building process with its key activities model abstraction and model simplification, as well as the organization of model libraries. It emphasizes integrating discrete event and continuous modeling approaches as well as discrete event simulation of continuous processes. It also discusses simulation execution on parallel and distributed machines and concepts for simulation model realization based on the High Level Architecture (HLA) standard of DoD.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS739	**IS Change Management**	3 Units	CPIS 702
Course Description	This course equips students with practical procedures to develop and change Information Systems. It examines the scientific methods to create an organization under advanced IS management. This course will shed some light on the management procedures of Information Systems. Upon finishing this course, students are expected to be able to develop and restructure Information Systems in any department and understand the Change Management process.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS741	**Data Warehouses and Knowledge Discovery**	3 Units	CPIS 702

Course Description	Data warehousing is to discuss techniques of storing large sets of data in multi-dimensional cubes according to predefined criteria to ease the retrieval and analysis. Queries and storage structures, data warehouses and knowledge discovery, and Web (queries on semi-structured data). Modern Trends in Intelligent Information Systems and DBMSs, Deductive Databases and knowledge bases, Temporal Queries and Reasoning, Active Databases, Object-Relational DBMSs.

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS743	**Organization Knowledge Management**	3 Units	CPIS 702
Course Description	The aim of this course is to provide the students with the basic concepts of Knowledge Management. It equips the students with the scientific and theoretical background and practical skills required for Knowledge Management. This course also covers the characteristics of Knowledge Management and the practical models used in Knowledge Management. It discusses the methods of collecting, classifying, deploying knowledge to serve the overall goals of the organization		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS751	**Advanced Systems Analysis and Design**	3 Units	CPIS 704
Course Description	Modeling and design of software at the architectural level. Architectural styles. Basics of model-driven architecture. Object-oriented design and analysis. Iterative development and unified process. Design patterns. Design by contract. Component based design. Product families. Measurement theory and appropriate use of metrics in design. Designing for qualities such as performance, safety, security, reliability, reusability, etc. Analysis and evaluation of software architectures. Introduction to architecture definition languages. Basics of software evolution, reengineering, and reverse engineering. Case studies. Introduction to distributed system software.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS753	**Software Metrics and Economics**	3 Units	CPIS 704
Course Description	Success in software development depends on three factors: software technology, economic factors and human relations. This course emphasizes on the above factors, how to deal with them in order to direct the software development process to a success. This course also covers a variety of important concepts that influence the economics of software development such as the procedures accompanying the software development process and cost accounting with an emphasis on the various measurement criteria of applications and their development process		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS761	**Cognitive Sciences in IS Applications**	3 Units	CPIS 704
Course Description	This course describes different methodologies and theoretical contributions to questions such as mental representation, the nature of expertise, and consciousness. It focuses on a fundamental question in cognitive science research: What kind of representation must be postulated to explain human intelligence or to develop computer intelligence? Is a scientific understanding of mind possible? This course is truly interdisciplinary and is not like conventional philosophy or psychology courses as it focuse on the application on information systems.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS763	**Data Visualization**	3 Units	CPIS 701
Course Description	Principles, techniques, and practices in data, information, multivariate, and scientific visualization. Includes visualization methods, data structures, examples, and tools. In addition, it discusses mathematical/physical/perceptual principles and modeling/rendering techniques used to create, represent, display, and animate models of 3D shapes and their properties (Computer Graphics).		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS771	**Topics in Networking**	3 Units	–
Course Description	Advanced network technologies and broadband communication, traffic characteristics and QoS provisioning. This course introduces advanced concepts of modern computer and telecommunication networks such as new technologies for TCP/IP, MPLS, Mobile IP, and Next Generation Internet: architecture and protocols. In addition, advanced topics such as Internetworking architectures and mobility management issues will be discussed in terms of user mobility, service continuity, and the corresponding performance analysis.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS781	**Virtual Reality**	3 Units	CPIS 704

Course Description	Virtual reality is a new trend that plays important roles in different information system domains, such as e-Learning, Medicine training, and many other domains. This course will discuss topics like: the need of virtual reality and virtual reality applications, virtual environments, implementation technologies and design techniques, 3D human-computer interaction. In addition, the course should highlight the new trends in the area of Virtual Reality.

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS791	**Bioinformatics**	3 Units	CPIS 701 + CPIS 704
Course Description	Introduces biological databases and bioinformatics software. Sequence comparison algorithms and tools. Sequence analysis and molecular phylogenetic. Biomolecular 3D structure and modeling. Bioinformatics theory, tools, and techniques. Computational biology problems along both algorithmic and statistical approaches. The different methods for multiple sequence alignment, genome sequencing, comparative analysis of genome information, gene prediction, finding signals in DNA, phylogenetic analysis, protein structure prediction. Other topics covered include microarray gene expression analysis and computational proteomics.		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS795	**Research Seminar**	3 Units	–
Course Description	This course provides the required background to important theoretical and applied issues in information systems. It aims to deepen the candidate's grasp of the theories, techniques and methods commonly employed in a certain emerging area of information systems. It is possible that we have many sections with different titles and contents and may have one single student (if situation mandates).		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS796	**Selected topics**	3 Units	–
Course Description	This course provides the required background to important theoretical and applied issues in information systems. It should be run as a seminar and a discussion forum in which students are assigned a new topic to research and discuss. It is possible that we have many sections with different titles and contents and may have one single student (if situation mandates).		

CODE	COURSE TITLE	CREDITS	PREREQUISITE
CPIS799	Thesis	20	
Course Description	A thesis/dissertation is a requirement for all Doctor of Philosophy (PhD.) students. It is considered as primary evidence of the student's capacity for research, independent thought and of his ability to write professionally in the language of instruction.		

Course Registration Procedure

Students are required to register for their courses before the deadline is announced every semester. Please refer to the calendar on the KAU website for the deadlines. It is recommended that the student contact the academic advisor to get advice before course registration. The course schedule and list of courses are available online on ODUS+ before the start of the semester. It is the core responsibility of the students to register appropriately; credit will never be given if the course is not registered properly via ODUS+. For more guidance, please refer to Table 2 above, showing a semester-wise list of courses. The maximum course load is 12 **credit hours**. During the thesis writing phase, **CPIS-799** must be registered every semester until thesis writing completion. Students should do that with the help of their supervisor.

Late Course Registration

Late registration is allowed **within two weeks** after the start of the semester. However, it requires academic approval from the academic advisor. Students must contact the graduate academic affairs office and follow the procedure for every late registration. Permission will be given only to students who have a particular excuse or exceptional circumstances.

Approval for Academic Affair Requests

For all of the academic affair's requests, like making a committee for thesis defense, postponing or dropping a semester, transferring credit hours, registering for special courses, etc. (see the full list of the requests in Table 5), the student is required to fill in the corresponding form and send it to Academic affairs committee through his/her advisor/supervisor. The supervisor first checks the validity of the request. If the request confirms that the requirements for the request are met, he forwards that request to the academic affairs committee for approval. Approval is a must for any academic affairs request. Please refer to Figure 1 to see the workflow of your academic request.

Bonding between a Student and the Academic Advisor

At the time of the admission, each student is linked to an academic advisor. To know your academic advisor, please refer to ODUS+. It is also the responsibility of the student to invest some time in building a positive connection with his academic advisor. Mutual understanding, a friendly environment, honesty, and positive bonding are the essential requirements for this relationship. The students are expected to discuss all their issues related to academics and research with their academic advisors. Progress must be discussed periodically, and special attention should be given to problematic situations, such as low GPA, completion of required courses, thesis writing schedule, and avoiding unnecessary delays in graduation. The academic advisor/thesis supervisor and student roles are described in detail in the section Academic Affairs.

Change of Academic Advisor/Thesis Supervisor

The change of an academic advisor or thesis supervisor is not encouraged. However, it may be considered under very special circumstances only, such as when the academic advisor has left the department. A prescribed form is available for both types of requests, which need to be approved by the AAG. The approval will be based on an exclusive and valid reason only.

Adding Course

The student should add courses according to the provided list of courses and the given schedule. It is the student's core responsibility to meet with particular authorities if the course is not offered, the time/day of the lecture is changed, or there is any other conflict.

GPA Requirements

The minimum Grade Point Average (GPA) requirement for the PhD program is **3.75.** Students must contact the academic advisor/AAG committee to maintain their GPA for thesis registration and graduate on time.

Classroom Attendance

The IS department follows a strict policy for classroom attendance. **75% attendance** is mandatory in every course – any lesser attendance will result in a **DN** grade. In case of absence from lectures, the student should provide legal documents before or after the lectures to justify his absence. Covering lectures and assessments during the leave period is the student's primary responsibility. Being absent without a notification can cause you to be reported as "discontinued."

Incomplete (IC) Grades

In exceptional cases where a student faces serious difficulties that prevent him/her from completing and submitting the coursework (e.g., assignments, projects, or exams) on time, he/she may be given an **IC** grade (it means the grade in this course is incomplete). The student should fulfill the missing coursework within the first month of the following semester. Failing to meet this condition will result in an **F** grade for this course. It is essential to mention that **IC** does **NOT** mean "it is the second chance to repeat the course."

Grading System

The university uses letters to represent grade achievement in every course. A student's highest GPA is 5.0, whereas if a student receives less than 60 marks in a, he will be awarded an F (Fail). Table 7 highlights the range of marks, corresponding grade symbols, and cumulative grade point average (CGPA).

Table 7: Range of Marks and Grade Symbol

Range of Marks	Grade Symbol	Grade Points
95 – 100	A +	5.0
90 – 94	A	4.75
85 – 89	B +	4.5
80 – 84	B	4.0
75 – 79	C +	3.5
70 – 74	C	3.0
65 – 69	D +	2.5
60 – 64	D	2.0
Less than 60	F	1.0

Academic Transcripts

An academic transcript is an official document the university provides showing all the records of a student's performance during his studies, such as courses taken and grades achieved. A student may get an unofficial copy of his transcript anytime through the ODUS+ and Master+ online systems. The final transcript with a stamp and signature will only be issued from the deanship of admission.

Admission Cancellation

The faculty of computing is very strict about observing students' progress regularly. Long absence without any reason or permission, skipping many semesters, failing in courses several times, and unsatisfactory performance can lead the student toward admission cancellation. Therefore, the students are required to maintain the necessary level of performance. The students must contact the academic advisor in any situation to avoid admission cancellation.

Thesis Writing

Thesis Procedure

The thesis is an integral part of a PhD and is completed under the supervision of an associate or full professor, referred to as Thesis Supervisor (TS). A good thesis work is expected to take a minimum of 2.5 years of extensive work (this is not a hard and fast rule; it mainly depends upon the student's efforts). Please see the graduation criteria below to learn how much work the degree requires. The student should begin to contact different TS (s) and ask them for their availability for thesis supervision. For details on selecting a research topic for your thesis and a TS, please refer to the following subsections. Please note that the students may access all the shared resources only with their KAU credentials.

As described earlier, starting from the 1st semester, each student is linked to an Academic Adviser (AA), who will guide him/her in all difficulties and academic requests. Students can refer to ODUS+ or Master+ online systems to learn about the academic advisor. In case you face any difficulty in finding your AA, contact the General Academic Adviser (GAA) "please contact the proper GAA based on your campus." After getting the agreement from the TS and finishing your thesis proposal, the student's TS becomes his/her AA, too. After that, the student is advised to contact his/her TS for all of the student's queries and academic requests. Also, to write a Ph.D. thesis, the students must follow the KAU guidelines. These guidelines are available on the KAU Deanship of Graduate Studies website, "KAU Thesis Formatting Manual."

Typical Thesis Milestones

Table 8 lists the thesis milestones to be achieved.

Table 8: Thesis Milestones with Suggested Deadlines

#	Thesis Milestones	Suggested Deadlines
0	Take the necessary courses	
1	Identify your research interest	
2	Contact an advisor and get his willingness to guide you through your research.	
3	Start to think of a thesis topic, select the TS to discuss the thesis with, and then decide on a research problem to formulate. Students may start writing their proposals.	2nd semester
4	Finalize your thesis proposal in consultation with your thesis supervisor.	3rd semester
5	Submit it to proposal evaluation committee for approval	After passing the comprehensive exam
6	Get your proposal approved and start working on your thesis	After passing the comprehensive exam
8	Formal registration of thesis	After passing the comprehensive exam
9	Thesis research work (Algorithm/methodology design)	

10	Annual research seminar (based on your research work and findings to show your performance). It should be done at the end of each year after getting your proposal approved and before submitting your final thesis.	End of each year after proposal approval
11	Publish required research papers (see below the criteria of research papers)	Before submitting the final thesis
12	Thesis submission (by the student and after the approval from the TS) through the Master+ online system to the university's Scientific Council (المجلس العلمي) and wait for their acceptance	
13	After acceptance of the thesis by the university's Scientific Council, send a request to AAG, (through TS) for forming a committee for the thesis defense.	
14	Apply for thesis defense through Master+.	
15	Fill in thesis defense presentation form and submit to Vice Dean for Graduate Studies and Research for allocation of time and date for defense presentation	
16	Thesis defense through a presentation	End of 6th semester

Policy and procedures concerning the preparation, reviewing, submission, and evaluation of Thesis

The following subsections describe the policies and procedures for successfully completing and defending the PhD Thesis.

Choosing a research topic for PhD Thesis

- Students are encouraged to think about possible research topics for their thesis in their second semester.
- Identify your research interest through the courses you study and from your readings.
- Build your knowledge on the suggested topic by reading related books, journals, research papers, and articles.
- Conduct a literature review of papers/articles about the same topic.
- When reading, focus on issues, problems, and future work.
- The topic and research field of a PhD thesis must be selected so that the student can complete the thesis work within a reasonable time and with reasonable effort.
- Discuss these with your advisor and decide on a research problem to work on.

How to find a thesis supervisor?

- The PhD thesis supervisor must be an associate or full professor.
- The student must get to know the faculty members and their field of research. Students can use one of the following ways to figure out the potential supervisors' areas:
    1. Go over their official KAU website.
    2. Go over their Google Scholar or ResearchGate page (if available).
    3. Ask your AA to help you in this matter.
    4. Send a direct email to a potential supervisor.

5. Visit this list, which might be helpful to start with. This list is updated every semester.

- Shortlist the faculty members whose research areas match your interests.
- Email or contact the potential supervisor to start a gentle conversation to know their willingness to be a possible supervisor. If a faculty member is willing to supervise you for the thesis, the student and TS should sign the Supervisor joining form [AAG-2].
- Consult the AA for more information.
- Equip the necessary skills from courses and supplementary resources online.

Writing Proposal for Thesis

- After finalizing the thesis topic with your thesis supervisor, the next step is to write a proposal for the thesis.
- The proposal for a thesis or dissertation essentially outlines the proposed research. The more precise the plan, the more likely the student's thesis supervisor or thesis committee will approve it, with a high probability that the final proposal will also be accepted.
- The research proposal should be written using the prescribed template, found here.
- A good proposal should include the following:
    - Introduction of the topic or problem
    - Importance of the proposed research
    - Significant prior research (Literature review)
    - Gaps/Issues in the previous research studies
    - Possible research approach or methodology
    - Potential outcomes of research and the importance of each
    - Proposed timeline
    - Descriptions of the proposed chapters in the thesis
    - Bibliography
- The research proposal timetable should indicate annual research seminars and the final seminar.
    a. Annual seminars (when the student feels the approach becomes clear and the solution model with results is ready for presentation). Feedback is expected. These are only suggestive and illuminating, but the researcher (after consulting his TS) is free to adopt or neglect the feedback based on the research circumstances.
    b. Final seminar (after the whole work is finished and the research is ready for defense, maybe before starting to write the thesis).

Submitting the proposal for review

- Once the proposal is ready and approved by the thesis supervisor, the TS will submit it to the AAG Committee for review and initial approval.
- You can download the proposal evaluation form here to see how the students' proposals will be evaluated.

Review and approval of the proposal

- The submitted proposal will be sent to two reviewers for their feedback.
- The AAG committee will make its decision based on the reviewers' feedback. The committee's decision, along with the reviewers' feedback, will be sent to the student and the respective TS.
- If the student requests changes in the proposal, he/she should update it accordingly.
- If required, the revised proposal (after incorporating the reviewers' suggestions (or requested changes)) should be re-submitted for re-evaluation.
- Once the proposal is approved, the student may start working to complete the proposed thesis work in consultation with the supervisor.

Submission of the final Thesis

To submit the thesis, the student must do the following:

- Annual thesis seminars.
- Complete research work.
- Complete thesis writing.
- Format it according to university guidelines. The guidelines for writing the thesis can be downloaded **here**.
- Get the thesis approved by TS.
- Publish required research papers.

The final thesis should be submitted by the student after the approval from the TS to the university's Scientific Council (المجلس العلمي) through the online Master+ system. Then, wait for their acceptance. After the university's Scientific Council accepts the thesis, the student will fill in the form for thesis submission. TS and the Chairman should sign that form. Then, the student will request AAG (through TS) to form a committee for the thesis defense. Upon approval from AAG, the student will apply for thesis defense through Master+. Then, fill in the thesis defense presentation form and submit it (through TS) to the Vice Dean for Graduate Studies and Research to allocate time and date for the defense presentation. He will allocate the time and date for the thesis defense presentation. The student will defend his/her thesis through a public presentation on the given date and time.

Graduation Requirements for PhD

The graduation requirements are as follows:

1. **Research Publications:** Publish two research papers.
    - The first paper must be in an **ISI-indexed journal** with an impact factor and must not be a review paper.
    - The second paper can be **published or accepted** in a **Scopus-indexed journal** or presented at a well-known conference.
2. **Pre-Defense Seminar:** Successfully conduct the pre-defense seminar.
3. **Thesis Submission:** Complete, finalize, and submit the thesis document.

How to arrange for an annual seminar?

1. The supervisor should fill in the form (نموذج حجز موعد -- Pre-defense seminar form) available **here**.
2. Fill out the form and print it.
3. Get it signed by the supervisor and the HoD
4. Send it to V. D. for research
5. He will announce the date and time for the pre-defense seminar

Evaluation and grading of the Thesis

- At least three weeks before the proposed defense date, the student will provide three hard copies of the thesis for the committee members to the HoD office.
- At least three research committee members, including the advisor, should be present during the defense.

Academic Affairs

Academic Affairs

The Committee for Academic Affairs for Graduate Studies (AAG) is responsible for helping students throughout their stay at the IS department. This includes course registration, adding/deleting courses, selecting a thesis supervisor, and so on (a full list of academic requests is shown in Table 9).

The following subsections describe the roles of a student, academic advisor, and thesis supervisor.

Student Roles

During Taught Courses:

Each newly accepted student is assigned an academic advisor who guides and advises the student during his study period. As a student, you should:

- Assure that you are assigned to an academic advisor (AA). If not, please contact the General Academic Advisor (GAA) for guidance.
- Meet your AA at least twice a semester.
- Seek help and make the most of your AA experience.
- Consult your AA whenever you face any difficulty.
- All academic requests, such as (dropping a semester, postponing a semester, and so on) should go to your AA first and be approved.
- Stick with the typical degree plan in Table 2 to avoid delay.

During Thesis:

- Once the student signs the thesis supervision agreement form, the student cannot change the TS. In an exceptional situation, like the TS has left the department, etc., a request to change the TS must be sent to the AAG committee.
- During his proposal work, the student must meet with the TS once a week (or fortnight if agreed upon by the TS).
- The student must meet the TS once a month (or else as agreed by the TS) during his work on the thesis.
- The student must follow the TS guidelines.
- A student cannot take any co-supervisor without prior permission of his TS. A request may be made to TS for this, which may be accepted or rejected.
- When advised by TS, the student is encouraged to write two papers from his/her work. However, publication of the paper is not a condition for acceptance of his work/thesis.

Academic Advisor & Thesis Supervisor

Academic Advisor (AA):

He/she is a faculty member responsible for monitoring the student's progress during his/her early stages of studying courses. The role of AA ends when the student finds a thesis supervisor, agrees to work together, and signs form [AAG-2]

Thesis Supervisor (TS):

He/she is a faculty member who is responsible for monitoring the student's progress during his/her work on the thesis. The role of TS starts when a TS agrees to supervise a student and signs the form [AAG-2]. The thesis supervision role ends once the student successfully defends the thesis; otherwise, the student will remain under his/her supervision.

General Academic Advisor (GAA):

There is only one GAA for boys and one for girls. The role of the GAA is to monitor the overall process of advising and supervision. All AAs and TSs should cooperate with the GAA requests.

Committee of Academic Affairs for Graduate Studies (AAG):

This is the committee responsible for studying cases related to academic affairs. It consists of some faculty members. All academic requests related to graduate studies are sent to the AAG committee for approval.

Academic Affairs Activities

Academic Affairs Requests:

Table 9 shows all academic affairs requests. Each request has a distinct form to be filled out (see all the forms in Appendix 1). The student should submit all requests through AA/TS. AA/TS approves/rejects any request if and only if it satisfies the regulations.

Regulations of Graduate Studies:

The regulations are the set of rules that govern the graduate studies processes. The university writes them and should be followed. The link has all the regulations, which should be carefully read and acted upon.

How to submit an academic affairs request?

A student initiates any academic request after consulting the AA or TS. The AA/TS studies the request and makes sure that the request conforms to the regulations. After the AA/TS's approval, the request is forwarded by the AA/TS to the GAA for a final checkup. If the request is valid, it is sent by the GAA to AAG. Once the AAG committee approves the request, it is forwarded to the head of the department for final approval. Figure 1 depicts the steps of submission for any request to AAG.

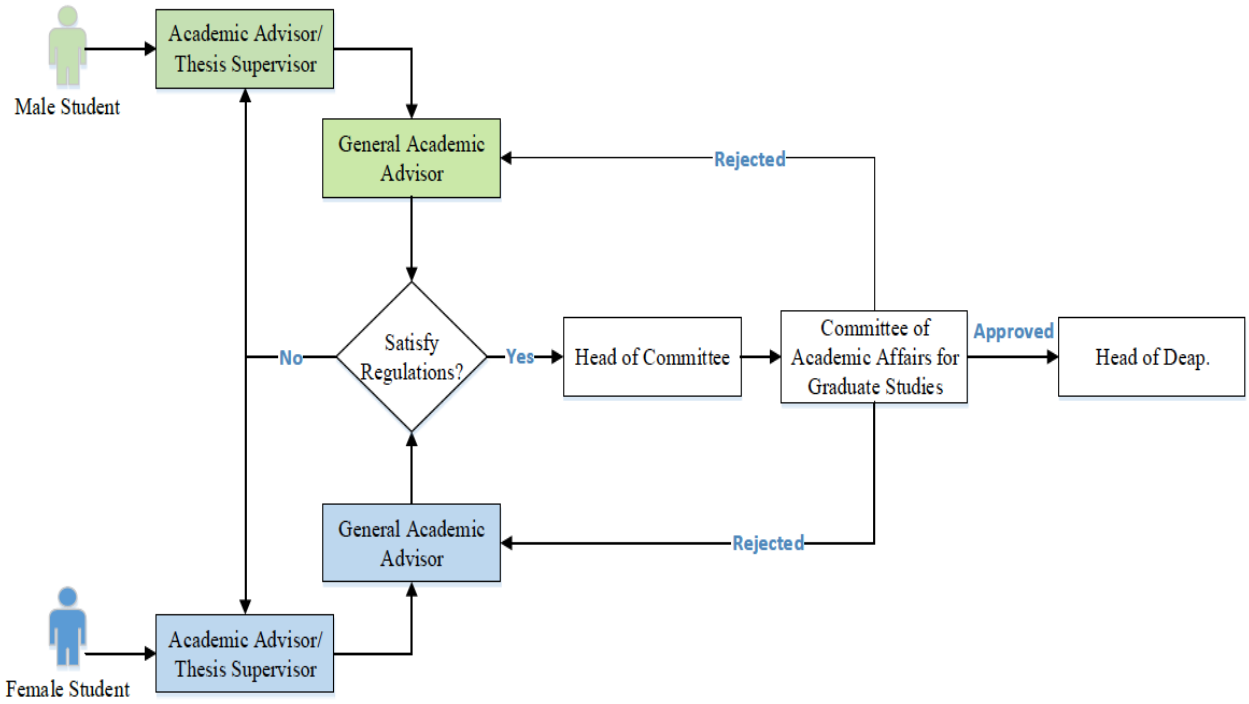

Figure 1: Workflow of submission of academic affairs requests to AAG

Types of Academic Affairs Requests

Table 5 shows all requests a student can make and must be completed by his/her TS. All requests should be made by:

1. Filling in the proper form by the TS through Itmam.
2. Ensuring the request and the student situation are aligned with the regulation – Appendix I.
3. Attaching the proper supporting documents (e.g., transcript, etc.).

All requests will be forwarded automatically to the GAA based on the student campus.

Table 9: List of Forms and their Description

Form Code	Form Title	اسم النموذج
AAG-1	Additional Attempt in Graduating Period	فرصة إضافية لتجاوز المدة النظامية
AAG-2	Approving the thesis' title and Appointing Supervisor(s)	إقرار موضوع الرسالة وتعيين مشرف
AAG-4	Modifying the Supervisor or Supervision Committee	تعديل مشرف أو لجنة اشراف
AAG-5	Dropping a semester	حذف الفصل الدراسي (الاعتذار عن الدراسة)
AAG-6	Forming a committee for a final thesis defense	تشكيل لجنة مناقشة
AAG-7	Modifying the committee for thesis defense	تعديل لجنة مناقشة

AAG-8	Postponing of a semester of study	تأجيل دراسة فصل دراسي
AAG-9	Postponing an admission	تأجيل قبول فصل دراسي
AAG-10	Modifying the Thesis Title	تعديل عنوان الرسالة
AAG-17	File Reinstatement	إعادة قيد
AAG-20	Request to approve a proposal defense seminar appointment	طلب الموافقة على موعد السيمينار للمقترح البحثي
TBC	Dismissing a student	إلغاء قيد
TBC	Submitting the thesis to the department to approve it	تسليم الرسالة للقسم العلمي وإجازتها للمناقشة

Academic Support Resources

- **Faculty of Computing and Information Technology**
  Website: https://computing.kau.edu.sa/Default-611-EN

- **Deanship of Graduate Studies**
  Website: https://graduatestudies.kau.edu.sa/Default-306-EN

- **Deanship of Scientific Research**
  Website: https://dsr.kau.edu.sa/Default-305-EN

- **Deanship of Library Affairs**
  Website: https://library.kau.edu.sa/Default-212-EN

- **Digital Library**
  Website: https://kau.app.deepknowledge.io/home

- **Vital Source: King Abdulaziz Scientific Platform KAUSP**
  Website: https://kausp.sa/

Campus Facilities and Services

- **Health Clinics**
  Website: https://shifaa.kau.edu.sa/default-en.aspx#services

- **King Abdulaziz University Hospital**
  Website: https://hospital.kau.edu.sa/Default-599-EN

- **Counseling Service**
  Website: https://studentaffairs.kau.edu.sa/Pages-273034-en.aspx

- **Housing information**
  Website: https://studentaffairs.kau.edu.sa/Pages-273138-en.aspx

- **Aziz Supercomputer (High Performance Computing Center HPCC)**
  Website: https://www.hpcc-kau.com/

Appendix I

Here is the link for all the Graduate Studies Regulations (**click here**)