

Appendix 1: Focus group questions.

1. What have been the *strengths* of your dental education so far?
2. What in the current curriculum do you feel works well?
3. What have been *weaknesses* in your dental education so far?
4. What areas in the curriculum need to be modified?
5. What were the *opportunities for improvement* that would most dramatically enhance the quality of the dental education experience for you and for future students? In other words, what are areas of “untapped potential” that the dental school should work to enhance in the future?
6. List up to three suggestions for modifying the current curriculum.
7. What are the *threats to the quality* of dental education that need to be addressed so dental school (and dentistry as a career option) remains attractive to college students making decisions about professional careers?
 - A. Active Lectures
 - B. Small Group Discussion
 - C. Practical simulation
 - D. Team-based projects
 - E. Case-Based Learning
 - F. Problem-Based Learning
8. To what extent the curriculum has helped you to be prepared for research investigation and problem-solving abilities (critical thinking)?
9. What do you think of the current assessment techniques?

Appendix 2: Outcome of ADA* Survey (Means of 58 US* Dental Schools).

COURSES	Clock Hours				Science Area
	Lectures	Practical	Clinic	Total	
Gross/ Macro Anatomy	83.6	110.4	7.1	193	BIOMEDICAL SCIENCES
Microscopic Anatomy	61.2	36.3	4	88.9	
Physiology	94.6	11.5	8	97.1	
Biochemistry & Molecular Biology	73.2	23.1	5	76.9	
Pathology - General & Systemic	87.8	27.9	6.3	95.9	
Microbiology + Immunology	90.9	19.5	6.8	91.5	
Pharmacology	76.8	5.1	21.9	80.9	
724.2 hours					
Craniofacial Biology	26.1	10.9	4.0	28.9	
Microbiology + Immunology	90.9	19.5	6.8	91.5	
Pharmacology & Therapeutics	76.8	5.1	21.9	80.9	
813.7 hours (including other topics)					
Oral & Maxillofacial Radiology	46.4	18.1	71.3	123.8	
Oral & Maxillofacial Pathology	69.8	10.9	30.8	89.8	
Oral Diagnosis & Treatment Planning	60.9	14.0	160.0	208.1	
Physical Evaluation/Data Collection	32.8	16	80.2	94.1	
Oral Medicine	22.2	2.5	40.3	42	
557.8 hours					
Operative Dentistry	73.4	159.5	399.7	559.5	
559.5 hours					
Endodontics	38.1	49.2	100.8	169.8	
169.8 hours					
Periodontics	67.0	23.1	236.5	292.6	
292.6 hours					
Prosthodontics	112.9	237.5	491.5	747.6	
747.6 hours					
Oral & Maxillofacial Surgery	42.5	4.4	149.2	160.2	
160.2 hours					
Pediatric Dentistry	41.6	20.3	151.7	177.6	
177.6 hours					
Orthodontics & Dentofacial Orthopedics	57	48	41.1	93.5	
93.5 hours					
Dental Public Health & Prevention	37.0	11.1	58	77.6	
77.6 hours					
Biomaterials Science	38.0	27.2	25.3	63.3	
Esthetic Dentistry	17.5	25.7	78.6	70.5	
Implant Dentistry	27.8	18.7	36.3	67.1	
Orofacial Pain & Dysfunction	18.2	6.3	13.5	24.3	
Anesthesia/Pain & Anxiety	31.4	8.5	47.5	64.0	
General Medicine Emergencies	14.8	5.8	17.1	22.3	
Community-Based Patient Care	14.4	13.5	197.4	154.8	
Ethics, Jurisprudence	40.1	3.5	33.6	49.3	
Behavioral/Social Scientific Principles	44.6	6.8	60.5	72.7	
Practice Management	52.4	6.3	59.8	75.3	
Research	23.7	26.9	54.3	33.9	
352.8 hours (including other topics)					
Mean Of US Schools = 4,909.7 CLOCK HOURS					
* ADA: American Dental Association, US: United States					

Appendix 3: Survey questions for students.

1. I am: (Male, Female)
2. I prefer the following teaching methods to be used in my classes: (5-point Likert Scale: strongly agree -to- strongly disagree)
 - a. Lectures
 - b. Small Group Discussion
 - c. Practical simulation
 - d. Team-based projects
 - e. Case-Based Learning
 - f. Problem-Based Learning
 - g. Other (Open Ended)
3. For the following, please indicate how prepared you are with each topic within the curriculum: (5-point Likert Scale Not prepared at all -to- Very Prepared)
 - a. Foundational knowledge of dental Science
 - b. Comprehensive clinical skills
 - c. Infection control best practices
 - d. Communication skills when working with patients
 - e. Teamwork
 - f. Ethics and professionalism
 - g. Critical thinking (reasoning, analysis, and logical application of concepts in dentistry)
 - h. Data collection, problem solving, and interpretation skills
 - i. Business management of a dental office
 - j. Other ... (Open Ended)
4. Please indicate your agreement with the following: (5-point Likert Scale: strongly agree -to- strongly disagree)
 - a. The current curriculum has helped me to develop my research design and scientific writing skills.
 - b. I feel satisfied with the assessment methods used during my education.
5. What have the *strengths* of my dental education been so far? (Open Ended)
6. What have *weaknesses* in my dental education been so far? (Open Ended)
7. These are my *suggestions* for modifying and improving the current curriculum to achieve my learning objectives and enhance my educational experience at KSU-COD: (Open Ended)
8. Please indicate your opinion on the time devoted to each of the following subjects within the current curriculum: (4-point Likert Scale: "*inadequate*", "*appropriate*", "*excessive*", or "*not applicable*")

Basic Medical Courses, Oral Biology, Oral Radiology, Oral Pathology, Oral Medicine, Pharmacology, Dental Materials, Restorative Dentistry, Periodontics, Endodontics, Removable Prosthodontics, Fixed Prosthodontics, Oral Surgery, Pediatric Dentistry, Orthodontics, Implant Dentistry, Esthetic Dentistry, Diagnosis & Treatment Planning, Geriatric Dentistry, Medical Emergency, Behavioral Dentistry, Preventive Dentistry, Community Dentistry, Dental Office Practice Management.
9. Please list any suggestions you may have for modifying the current curriculum to better meet your learning objectives and educational experience at KSU College of Dentistry.
10. I am currently: (1st year student, 2nd year student, 3rd year student, 4th year student, 5th year student, an Intern)
11. My current GPA is (based on last year's academic records):

Appendix 4: Survey questions for faculty members.

1. Do you feel there is a need for curriculum reform at KSU College of Dentistry? ((No, Yes ... If yes, elaborate)
2. I see the benefit of incorporating the following types of teaching methods into the curriculum: (5-point Likert Scale: strongly agree -to- strongly disagree)
 - a. Problem-Based Learning (PBL)
 - b. Case-Based Learning (CBL)
 - c. Competency based education
 - d. Comprehensive Care clinics
 - e. Other suggested methods ... (Open Ended)
3. Please indicate how prepared you feel that a graduate of KSU College of Dentistry is for each of the following curricular topics: (5-point Likert Scale Not prepared at all -to- Very Prepared)
 - a. Foundational knowledge of dental science
 - b. Comprehensive clinical skills
 - c. Infection control best practices
 - d. Communication skills when working with patients
 - e. Teamwork
 - f. Ethics and professionalism
 - g. Critical thinking (concepts reasoning, analysis, and logical application in dentistry)
 - h. Data collection, problem solving, and interpretation skills
 - i. Business management of a dental office
4. Please indicate your agreement with the following: I feel satisfied with the assessment methods used in the curriculum. (5-point Likert Scale: strongly agree -to- strongly disagree)
5. Please list what you believe to be the STRENGTHS with the current curriculum: (Open Ended)
6. Please list what you believe to be the WEAKNESSES with the current curriculum: (Open Ended)
7. Please list your suggestions for modifying and improving the current curriculum to enhance the educational experience of the students at KSU College of Dentistry: (Open Ended)
8. Please indicate any courses or disciplines in the current curriculum that you feel are allowed INADEQUATE time for study: (Open Ended)
9. Please indicate any courses or disciplines in the current curriculum that you feel are allowed EXCESSIVE time for study: (Open Ended)
10. Additional comments regarding the current curriculum and reformation efforts: (Open Ended)

Appendix 5: Survey questions for alumni.

1. I am: (Male, Female)
2. What year did you graduate (complete your internship training) in? (Open Ended)
3. My final GPA upon graduation was: (Open Ended)
4. Are you currently enrolled in a postgraduate program? (No, Yes ... If yes, specify)
5. For the following, please indicate how prepared you are with each topic after having graduated from KSU College of Dentistry: (5-point Likert Scale Not prepared at all -to- Very Prepared)
 - a. Foundational knowledge of dental science
 - b. Comprehensive clinical skills
 - c. Infection control best practices
 - d. Communication skills when working with patients
 - e. Teamwork
 - f. Ethics and professionalism
 - g. Critical thinking (concepts reasoning, analysis, and logical application in dentistry)
 - h. Data collection, problem solving, and interpretation skills
 - i. Business management of a dental office
6. Based on your training at KSU, please list what you think are the MOST essential disciplines and skills to have in dental practice: (Open Ended)
7. What are the STRENGTHS of the dental education program at KSU College of Dentistry? (Open Ended)
8. What are the WEAKNESSES of the dental education program at KSU College of Dentistry? (Open Ended)
9. Please indicate your opinion on the time devoted to each of the following subjects within the curriculum at KSU College of Dentistry: *“inadequate”, “appropriate”, “excessive”, or “not applicable”*

Basic Medical Courses, Oral Biology, Oral Radiology, Oral Pathology, Oral Medicine, Pharmacology, Dental Materials, Restorative Dentistry, Periodontics, Endodontics, Removable Prosthodontics, Fixed Prosthodontics, Oral Surgery, Pediatric Dentistry, Orthodontics, Implant Dentistry, Esthetic Dentistry, Diagnosis & Treatment Planning, Geriatric Dentistry, Medical Emergency, Behavioral Dentistry, Preventive Dentistry, Community Dentistry, Dental Office Practice Management.
10. What suggestions do you have for modifying and improving the curriculum at the KSU College of Dentistry to assist students in being well-prepared to practice clinical dentistry in Saudi Arabia? (Open ended)