



MAJOR CHOSEN: OPERATIONS RESEARCH

I. A BRIEF DESCRIPTION OF THE MAJOR

The Operations Research major is designed to prepare the student with a thorough understanding of mathematics with a special emphasis on those areas of mathematics used by business or industry in operations research. The program is broad enough to allow the student to continue on with graduate studies in mathematics or operations research. A minor in business would also allow the student to pursue an MBA degree. While the student should first consider graduate school, the program will allow the student to seek an entry-level position in industry. The program requires 36 hours in the major and 18-25 hours in a selected minor study concentration.

The job market is strong for Operations Research majors in terms of job satisfaction, advancement opportunities, and salary. You may check job opportunities out on the following internet site: http://www.informs.org/Resources/Job_Information/

II. COURSE HIGHLIGHTS

Here are some of the courses you will especially enjoy:

Calculus A 4-semester sequence of courses which is the heart of the math program. You will study tools that enable one to approximate functions with polynomials, calculate volumes and area of irregular shaped objects, and find maxima and minima of functions. These tools are essential in any successful operations research career.

Production/Operations Management, Introduction to Logistics Management and Quantitative Production Methods These are several of the required business and management classes necessary for the implementation of the techniques of operations research in real-life business.

Operations Research I and II These classes lay the foundation for your professional operations management study.

Probability and Statistics I and II In these calculus-based classes you cover the mathematical base for univariate and multivariate probability and statistics.



III. A TYPICAL YEARLY COURSE SEQUENCE

This is a suggested program of study for you. Other refinements to your program can be made when you consult your faculty advisor at the time of your enrollment.

You will notice that some courses are listed as electives. These electives give you the opportunity to tailor your program by selecting courses you would like to take for your own personal enjoyment.

Freshman

Orientation	1	Orientation	1
Transcendental Functions	3	Calculus I	3
History of Civilization	3	History of Civilization	3
Old Testament Messages	1	New Testament Messages	1
General Psychology	3	Fundamentals of Speech	3
English Composition.....	<u>3</u>	English Composition.....	<u>3</u>
Total	14	Minor or Electives	<u>2</u>
		Total	16

Sophomore

Calculus II	3	Elementary Statistics	3
Principles of Microeconomics.....	3	Elementary Linear Algebra	3
Principles of Accounting I	4	Calculus III	3
Computer Programming Elective.....	3	Principles of Macroeconomics	3
English Literature	3	Principles of Accounting II	4
Sophomore Bible Elective	<u>1</u>	Sophomore Bible Elective	<u>1</u>
Total	17	Total	17

Junior

Calculus IV	3	Discrete Math	3
Operations Research I	3	Operations Research II	3
Bible Doctrines	3	Christian Family Forum	1
Principles of Management	3	Bible Doctrines	3
Psychology Elective.....	3	Oral Communication for the Professions	3
Minor or Electives	<u>1</u>	Introduction to Logistics Management.....	<u>3</u>
Total	16	Total	16

Senior

Mathematics Seminar	1	Probability & Statistics II	3
Probability & Statistics I	3	Differential Equations	3
Principles of Operations Management	3	Mathematics Elective	3
Mathematics Elective.....	3	Upper-Level Bible Elective.....	2
Upper-Level Bible Elective.....	2	Minor or Electives	<u>5</u>
Minor or Electives	<u>4</u>	Total	16
Total	16		



IV. FACILITIES, EQUIPMENT, AND OPPORTUNITIES

Based on the results of placement tests, you will be placed into courses on a level appropriate for you. Therefore, you will not waste time nor will you face an unreasonable challenge.

Completely equipped computer laboratories are available for your use. There are many academic computer labs conveniently located all over campus. They consist of various types of PCs and laser printers, and are all interconnected via a Novell computer network.

Chapel is a central feature of Bob Jones University. This 35-minute service is held every morning, Monday through Thursday. These services are a source of great inspiration to students. Four days a week the Chapel message is brought by the President or by selected speakers. Each Friday the Chapel period is devoted to the meetings of various literary societies.

Davis Field House, with over 87,000 square feet and seating for 3,000 people, contains 4 full-sized courts; auxiliary courts; indoor and outdoor tracks; swimming pool; café; and a fitness center with fully-equipped exercise room, aerobic room, sauna, and whirlpool.

The Mack Library, with 90,000 square feet of floor space and seating for over 1,300 students, gives you access to 294,000 volumes, 1,100 current periodical subscriptions, and more than 17,000 music, speech, and language recordings. Mack Library offers access to over 65 electronic databases on the library web site. An interlibrary loan program is available through OCLC, a national database, for books not held in our library. Other prominent features include the Jerusalem Chamber, a replica of the room in Westminster Abbey in London in which work was done on the 1611 King James Bible, and the University Archives Room which displays materials about the Founder and history of the University.

If you are planning to live on campus, you will be glad to know that all of our residence halls are air-conditioned, have wall-to-wall carpeting, and have a phone in each room. You will be able to make long-distance calls directly from your room and have them automatically placed on your school bill. Computer network connectivity is available in all residence halls as well.

All of our classrooms are air-conditioned, and there are awnings over the sidewalks to keep you dry when it rains. The Dining Common serves 8,500 delicious meals a day, and the Snack Shop and Bookstore in the Student Center carry just about anything you'll need.

You will find that the finest Christian young people in the country are your fellow students, and without trying too hard, you may end up making a life-long friend!

V. ABOUT THE FACULTY

The operations research faculty is well qualified to teach you bringing over 150 years of combined teaching experience to their task. In addition, a number of them have done outside consulting work. You will benefit from the practical, firsthand experiences they have had using their knowledge to solve actual industry problems.



Dr. Gary Guthrie (Ph.D., Mathematics and Computer Science) is chairman of the division of mathematical science and has been teaching for over 35 years. In addition to teaching, he has been a computer programmer and consultant, and coauthored a mathematics of interest book.

Dr. Bob Taylor (Ph.D., Mathematics) is the dean of the College of Arts and Science. He has been teaching for over 40 years.

Mr. Larry Lemon (M.S., Mathematics) has been teaching for over 35 years. He has authored and coauthored several mathematics books.

Dr. Kathy Pilger (Ed.D., Mathematics) has been teaching for over 20 years. She has authored several textbooks in mathematics and is in charge of the BJU mathematics education program.

Dr. Dave Brown (Ph.D., Mathematics) has been teaching for over 15 years. His Ph.D. is in the area of abstract algebra, and he has a special interest in number theory. He also acts as advisor for all BJU mathematics majors.

Dr. Jim Knisley (Ph.D., Mathematics) has been teaching for over 10 years. He also teaches several computer science courses and has a special interest in computational mathematics.

VI. CAREER OPPORTUNITIES AND PLACEMENT

As an Operations Research major, you will have the opportunity to go into industry or to graduate school before entering your career. Our graduates not only are readily accepted in most graduate schools, but also are eagerly recruited. Many graduates place at the top of their respective graduate classes.

The following are some opportunities available to you:

- Operations Research** – use your skills in industry
- College teaching** - several of our graduates have Ph.D. degrees and are teaching at major universities
- Statistician** - used in quantitative management
- Government and Industry**
- Computer science**
- Law**

VII. BJU: AN AFFORDABLE EDUCATION

Enclosed is an expense sheet detailing the cost of attending Bob Jones University. When you compare our charges to those of other private colleges, we think you will be pleasantly surprised. We believe we offer a student more value for the dollar than anyone else in America. And to help you see how affordable "the Opportunity Place" can be for you, we have enclosed a financial aid brochure that you can use to evaluate your own situation. Your Admissions Counselor or the Director of Student Financial Aid would be happy to discuss this with you if you have any questions.



HOW TO TAKE THE NEXT STEP . . .

If you can see yourself in the career described in the profile, then a great opportunity awaits you at Bob Jones University. It is the opportunity for the premier Christian college experience in all the world. It is the opportunity for learning, for fun, and for developing new friendships. It is the opportunity to prepare for a lifetime of service for the Lord . . .

The Opportunity Place . . . God's Special Place for You.