

FYUGP COLLEGE BASKET
BACHELOR OF COMPUTER APPLICATIONS (BCA)
Major

Specializations: **CYBER SECURITY, DATA SCIENCE, MACHINE LEARNING, WEB DEVELOPMENT**

SEMESTER 1			
Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC-1	UK1DSCCAP101	Problem Solving using C	4
DSC-2	UK1DSCCAP100	Fundamentals of IT & Computers	4
DSC-3	UK1DSCCAP102	Desktop Management	4
Multi-Disciplinary Course			
MDC 1	UK1MDCCAP101	Introduction to IT	3
Ability Enhancement Course			
AEC-1		English	3
AEC-2		Malayalam / Hindi	3

SEMESTER 2			
Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC-4	UK2DSCCAP103	Introduction to Data structures	4
DSC-5	UK2DSCCAP101	E-commerce	4
DSC-6	UK2DSCCAP104	Introduction to Data Science	4
Multi-Disciplinary Course			
MDC 2	UK2MDCCAP100	Office Automation	3
Ability Enhancement Course			
AEC-1		English	3
AEC-2		Malayalam / Hindi	3

SEMESTER 3

Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC-7	UK3DSCCAP201	Database Management	4
DSC- 8	UK3DSCCAP203	Modern Information Systems	4
DSC-9	UK3DSCCAP200	Free and Open-Source Software	4
Discipline Specific Elective			
DSE -1 (Cyber Security)	UK3DSECAP200	Introduction to Cyber security	4
DSE -1 (Data Science)	UK3DSECAP201	Data Science Fundamentals	4
DSE -1 (Machine Learning)	UK3DSECAP202	Introduction to Artificial Intelligence	4
DSE -1 (Web Development)	UK3DSECAP203	Web Development using HTML5 and CSS3	4
Value Added Course			
VAC - 1	UK3VACCAP200	Entrepreneurship in IT	3
Multi-disciplinary course			
MDC-3		Kerala Studies	3

SEMESTER 4

Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC- 10	UK4DSCCAP201	Software Engineering	4
DSC- 11	UK4DSCCAP203	Python Programming	4
Discipline Specific Elective			
DSE -2 (Cyber Security)	UK4DSECAP200	Ethical Hacking	4
DSE -2 (Data Science)	UK4DSECAP201	Python for Data Analytics	4

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DSE -2 (Machine Learning)	UK4DSECAP202	Knowledge Representation and Intelligent Agents	4
DSE -2 (Web Development)	UK4DSECAP203	Web Scripting using JavaScript	4
Value Added Course			
VAC - 2	UK4VACCAP200	Ethical Hacking	3
VAC - 3	UK4VACCAP203	Preface to Cyber Laws	3
Skill Enhancement Course			
SEC - 1	UK4SECCAP201	Computer Hardware Maintenance	3
Internship			
	UK4INTCAP200	Internship	2

SEMESTER 5

Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC- 12	UK5DSCCAP301	Computer Network	4
DSC- 13	UK5DSCCAP303	Operating system	4
DSC- 14	UK5DSCCAP305	Java Programming	4
Discipline Specific Elective			
DSE -3 (Cyber Security)	UK5DSECAP300	Cryptography and Network Security	4
DSE -4 (Cyber Security)	UK5DSECAP301	Cyber Forensics	4
DSE -3 (Data Science)	UK5DSECAP302	Data Mining concepts and Techniques	4
DSE -4 (Data Science)	UK5DSECAP303	Data Visualisation	4
DSE -3 (Machine Learning)	UK5DSECAP304	Introduction to Machine Learning Using Python	4
DSE -4 (Machine Learning)	UK5DSECAP305	Artificial Neural Networks	4

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DSE -3 (Web Development)	UK5DSECAP307	Web Application Development using Django	4
DSE -4 (Web Development)	UK5DSECAP306	PHP and MySQL	4
Skill Enhancement Course			
SEC - 2	UK5SECCAP300	Data Analysis Using Excel	3

SEMESTER 6

Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC- 15	UK6DSCCAP301	Visual Programming	4
DSC- 16	UK6DSCCAP303	Software Testing	4
DSC- 17	UK6DSCCAP302	Internet of Things	4
Discipline Specific Elective			
DSE -5 (Cyber Security)	UK6DSECAP300	Image Processing and Application	4
DSE -6 (Cyber Security)	UK6DSECAP301	Mobile & Wireless Security	4
DSE -5 (Data Science)	UK6DSECAP302	Data Analytics with R	4
DSE -6 (Data Science)	UK6DSECAP303	Big Data Technologies using Hadoop	4
DSE -5 (Machine Learning)	UK6DSECAP304	Recommendation Systems	4
DSE -6 (Machine Learning)	UK6DSECAP305	Deep Learning	4
DSE -5 (Web Development)	UK6DSECAP306	Mobile Application Development	4

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DSE -6 (Web Development)	UK6DSECAP307	Emerging Trends in Web Development	4
Skill Enhancement Course			
SEC - 3	UK6SECCAP301	Game Application Development	3

SEMESTER 7

Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC- 18	UK7DSCCAP407	Research Methodology	4
DSC- 19	UK7DSCCAP411	E-governance	4
DSC- 20	UK7DSCCAP400	Cloud Architecture	4
DSC- 21	UK7DSCCAP405	Augmented Reality	4
DSC- 22	UK7DSCCAP406	Man- Machine interface	4
Discipline Specific Elective			
DSE - 7 (Cyber Security)	UK7DSECAP400	Cloud Computing	4
DSE - 7 (Data Science)	UK7DSECAP401	Social Media Analytics	4
DSE - 7 (Machine Learning)	UK7DSECAP402	Computer Vision	4
DSE - 7 (Web Development)	UK7DSECAP403	Full Stack Development	4

SEMESTER 8

Category	Course Code	Name Of the Course	Credit
Discipline Specific Core			
DSC-23	UK7RPHCAP400	Research Project (Mandatory for UG Hons with Research)	12
DSC-24	UK7CIPCAP400	Internship Project (Mandatory for UG Hons)	

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PATHWAYS

Pathways	DSC Major + DSE* (4credits)	Minor** (4credits)	MDC# SEC VAC** (3credits each)	AEC (3 credits)	Internship (2 credits)	Total Credits
BCA (Single Major)	68 credits 17 courses (11+6)	24 credits 6 courses	27 credits 9 courses	12 credits 4 courses	2 credits	133
BCA Major with Multiple disciplines	68 credits 17 courses (11+6)	12+12 credits 3+3 courses	27 Credits 9 courses	12 credits 4 courses	2 credits	133
BCA Major with Single Minor	68 credits 17 courses (11+6)	24 credits 6 courses	27 credits 9 courses	12 credits 4 courses	2 credits	133



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