$$\begin{bmatrix} c_{11} & c_{12} & \cdots & c_{1p} \\ c_{21} & c_{22} & \cdots & c_{2p} \\ - & - & - & - \\ c_{n1} & c_{n2} & \cdots & c_{np} \end{bmatrix} = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1m} \\ a_{21} & a_{22} & \cdots & a_{2m} \\ - & - & - & - \\ a_{n1} & a_{n2} & \cdots & a_{nm} \end{bmatrix} * \begin{bmatrix} b_{11} & b_{12} & \cdots & b_{1p} \\ b_{21} & b_{22} & \cdots & b_{2p} \\ - & - & - & - \\ b_{m1} & b_{m2} & \cdots & b_{mp} \end{bmatrix}$$

$$c_{11} = a_{11}b_{11} + a_{12}b_{21} + \ldots + a_{1m}b_{m1}$$

$$c_{12} = a_{11}b_{12} + a_{12}b_{22} + \ldots + a_{1m}b_{m2}$$

$$c_{1p} = a_{11}b_{1p} + a_{12}b_{2p} + \ldots + a_{1m}b_{mp}$$

$$c_{21} = a_{21}b_{11} + a_{22}b_{21} + \ldots + a_{2m}b_{m1}$$

$$c_{np} = a_{n1}b_{1p} + a_{n2}b_{2p} + \ldots + a_{nm}b_{mp}$$